The
ILLINOIS
Medical Journal
Official Journal of The Illinois State Medical Society

JULY, 1960
VOL. 118, No. 1

The Role of the Doctor and Patient In Early Cancer Detection

WARREN H. COLE, M.D.,* *Chicago*

AS YOU KNOW, the theme of our conference here in Springfield is Early Detection of Cancer. One might ask, Is this a justifiable subject for detailed discussion, particularly since so much progess is being made in anticancer chemotherapy and other phases of the disease.

Surgery and radiation are fairly effective in the definitive treatment of cancer, and they are the only mechanisms which will cure cancer. The anticancer chemotherapeutic agents cause regression, but with the possible exception of methotrexate for choriocarcinoma, none of these agents is curative. Accordingly, there appears to be ample justification for continuing our efforts to seek the most effective methods of treating cancer, at least until the magic pill to destroy cancer is found. The total yearly deaths from cancer continue to increase, but largely because of a population increase since we are now obtaining cures in 33 per cent of total cases, instead of 25 per cent two or three decades ago.

This improvement in the percentage "cure" rate has been due to three major factors: (1) improved anesthesia, (2) more extensive operations, and (3) better preoperative and postoperative care. Of course, we expect improvement in anesthesia and pre- and postoperative care, but these improvements will be slight and comparatively slow in further development. We cannot expect any improvement from an extension of operations: we are already removing so much adjacent normal tissue with the tumor that removal of any more would jeopardize vital structures. Nevertheless, we can hope to improve results by utilizing principles to minimize the spread of cancer during the operation. For decades we have been aware of iatrogenic dissemination of cancer, but only during the past few years have we been devoting special attention to this hazard.

*Department of Surgery, University of Illinois College of Medicine, Chicago.

Presented at the First Illinois Cancer Congress, March 9, 1960, in Springfield.

All of us agree that if we could use effectively available knowledge in the treatment of cancer, we could cure another 10 to 20 per cent of patients. I wish to comment particularly upon the desirability of getting the patient with cancer to definitive therapy earlier.

Overcoming delayed treatment

At present there is far too much delay in obtaining definitive therapy. In a recent study we made of a large series of cases at Illinois Research Hospital, the delay between onset of symptoms and operation was 11 months. Most of this delay can be ascribed to the patient, but often we the physicians are to blame. When a patient comes into the hospital long after onset of symptoms, I usually ask him why he delayed so long, hoping to obtain some information that will help in the problem. The answers are variable but without exception discouraging. Some say, "The tumor gave me no pain so I thought it was not serious." This is often to be construed largely as an alibi, since on many occasions they have already been told by our physicians that the tumor is serious and should be removed right away. On other occasions they say they are "afraid of hospitals and afraid of a major operation." The facts are that in this case we are failing to impress upon the patient the dangers of delay, and failing to overcome the psychologic reasons for procrastination. This problem must be given serious thought and some plan devised to overcome it.

The question has been asked frequently: Where should cancer detection examination be done? We have a direct answer, but it does not offer a solution to the problem. We would prefer to have these examinations in the doctor's office, but the truth is that there are not enough physicians to examine even a majority of the people should they request an annual examination. In a carefully organized detection center with several physicians and their aides, it appears that more patients could be examined per hour of physician time, and more thoroughly. Accordingly, I think that we should encourage the need for detection examinations in physicians' offices, but should support a small number of detection centers throughout the country. One great advantage of having some detection centers is that they make a lot of lay people aware of the desirability and advantages of frequent examinations.

The American Cancer Society has done much to emphasize the need for frequent examinations for cancer, and has helped considerably in shortening the delay between onset of symptoms and operation. The Self Examination film on breast cancer has probably been the most powerful single mechanism adopted by it or any other group for getting the cancer patient to a physician at an earlier stage. This film has been very popular and draws a large crowd wherever it is shown. With practically no exceptions, after this film is shown in a community, a large number of women go to their doctors for examination of lumps they have discovered. Many lives are saved in this way.

One would think it obvious that the results of treatment following early detection would be superior to results of treatment delayed until the patient decides to go to his physician. However, it is amazing how often a nonconformist will subject data to various types of analyses and present figures to show that results of treatment are just as good in patients having their symptoms for three years as they are in patients having their symptoms for six months.

There are many fallacies in this reasoning. In the first place, many patients will not be alive at the end of three years; this feature alone will pad the results enormously in favor of patients having symptoms for three years or more. I would like to remind you that, with no exceptions, cancer requires time to destroy the patient. This time is variable, and its duration is actually unknown because practically all cancers are present for a certain length of time before symptoms are produced.

It appears reasonable to conclude that every day added to the duration of the tumor approaches by just that much time the day when the tumor will metastasize, and then may not be curable by surgery. This feature becomes increasingly important when we realize that surgery and radiation are the only two mechanisms which will cure cancer, and after a tumor has metastasized the chance of cure is lessened tremendously, particularly if the dissemination or metastases is by way of the blood stream. Surely the fact that each passing day approaches the time when a tumor may disseminate to the point where it is incurable by modern mechanisms would make it obvious that early diagnosis improves results.

Economics and efficiency of detection

We realize that when healthy people of all ages are given cancer detection examinations, the incidence of cancer will be quite low. In a report of 6,754 examinations performed on men and women 1948-1954 in the detection center of the University of Minnesota, Hitchcock and Aust[1] reported cancer in 2.81 per cent of the examinees. This is a bit higher than the incidence reported by other detection centers. Actually, of the 147 cancers found, 79 were symptomatic and 68 were asymptomatic. It was their intention to accept only patients without symptoms, but many with symptoms, mild as they might be, escaped the scrutiny of the admitting office.

Dr. Caesar Portes informs me that in the Cancer Prevention Center of Chicago the cost for examination per patient is slightly over $24. Their incidence of cancer is about 2 per cent. This makes the cost of finding each cancer patient about $1,200. Figures from some other centers have been higher than this. However, if we assume that the chance of obtaining a cure is greatly increased by the early diagnosis, this figure is not prohibitive, especially since a large number of precancerous lesions will be found and removed. So also will numerous other diseases be found; this represents very good preventitive medicine because most other diseases will be found in the early stages when cures will be more readily achieved. In patients past the age of 45, precancerous lesions were found in 28 per cent.

Results with early detection

At the annual meeting of the American Cancer Society in 1959, numerous reports were heard concerning the superiority of the "cure" rate for tumors diagnosed by cancer detection examinations rather than by routine methods. Brown[2] reported on 81 naval personnel with cancer of the lung, 26 of whom were diagnosed during annual examinations. In the group discovered by detection examinations 69 per cent of the tumors were resectable, compared to 49 per cent in the group diagnosed by routine methods, i.e., wating for the patient to go to the physician. The five-year survival rate of these patients was about 20 per cent compared to 5 to 10 per cent for all patients diagnosed by routine methods.

In a series of 1,000 patients with cancer of the breast, Urban noted a five-year survival rate of over 70 per cent for early cases in which the disease was asymptomatic, compared to 52 per cent in the patients having symptoms or a known mass for a variable length of time before operation. Studying patients in their registry, the Westchester Cancer Committee in New York found that 43 per cent of the patients without detectable spread of cancer at the time of diagnosis survived five years compared to only 20 per cent for the patients with detectable spread locally.

Recent analysis by Shahon and Wangensteen[3] of 9,035 patients in the University of Minnesota Cancer Detection Center (1948-1959) reveals a five-year survival rate (in gastrointestinal cancer) of 26.3 per cent for the symptomatic group and 62.5 per cent for the asymptomatic group, or two to three times higher.

In Hitchcock and Aust's series they noted that six of nine patients with asymptomatic cancer of the stomach were alive after five years, compared to only one of five patients with symptomatic cancer of the stomach. In their experience, achlorhydria was a very valuable indication of the presence of cancer of the stomach.

The data assembled above indicates quite clearly that the "cure" rate is much higher in patients whose cancer was discovered by detection examination than it is in patients who came to physicians after manifestations of cancer had developed. These data then justify the cancer detection examination, whether it is carried out in the physician's office or in the detection center.

Prospects for the future

One might ask: When will an agent or mechanism be developed which will be so effective in the cure of cancer that detection examination can be abolished? Af course, no one knows the exact answer to this question. Unfortunately, I do not believe the day when a magic pill will cure all forms of cancer is very close at hand. First, what can we expect of the high powered radiation machines such as the 18 million volt linear accelerator, the 50 million volt betatron, and the 1,200 Curie cobalt bomb? I am told by my radiologist friends that results with these powerful machines have been disappointing. If radiation is to be the solution to the treatment

of cancer, apparently a different type of radiation must be discovered, or ancillary methods devised to make it much more effective.

Surgery is probably the most effective over-all treatment of cancer, but we have already commented on the fact that further improvement in results will be slow in forthcoming, largely because the tumor has so often already metastasized by the time the operation is performed. There is reason to believe that, with the use of ancillary or adjuvant mechanisms, the results can be improved in patients having cancer cells disseminated at the time of operation, or shortly before. This supposition is based on animal experiments indicating that the administration of anticancer chemicals at the time of inoculation of cancers cells will prevent "takes" of the cancer cells; floating cells or cells recently disseminated (but not yet growing as active metastases) are much more sensitive to anticancer agents. We have such strong evidence of this in animals that there seems very little doubt of its veracity in the human being, if the right chemicals are used.

Already experiments are under way to test this hypothesis, utilizing nitrogen mustard, thiotepa, and other drugs at the time of operation. In our own experience with nitrogen mustard, the procedure appears fairly effective in cancer of the breast but not with cancer of the colon and rectum. It appears obvious to us that one agent might be affective with one tumor but not another. Unfortunately, to obtain the maximum benefit from such a procedure, numerous agents would have to be tried with each tumor. Better still, it would be desirable to assay each tumor against several anticancer agents and use the most effective one.

Our next question might be What are the prospects of an effective anticancer agent? In the first place, it is reasonable to predict that an agent for a single cancer will be discovered long before an agent for all cancers will be discovered. I am quite sure that many people in this room will see that day, but not the time when a single drug will cure all cancer. That accomplishment will be more difficult, and will require more than a few years. Actually the very favorable results obtained by Hertz and associates with methotrexate in choriocarcinoma suggest that we may already have the first of these drugs. They have several patients who have had regression for years.

Our next question concerning the future prospects of a cure might be Can we expect vaccines or antibodies to be effective against cancer? We must admit that no more than five or ten years ago even our most distinguished immunology scientists believed that cancer was not antigenic and therefore antibodies could not be produced for cancer. However, during the past few years much data has accumulated indicating that effective vaccines and antibodies can be made for certain animal tumors, and that the human being without cancer has a resistance of some type to it.

Production of immunity in animals

Only during the past few years have workers been able to induce a definite immunity in animals, although experiments in certain laboratories presented evidence years ago that an effective immunity might be possible. Working with a leukemic-like disease in mice, Friend[4] was able to prepare a vaccine capable of preventing transmission of the disease to other mice. She prepared the vaccine by injecting filtrates of spleen of infected mice into rabbits (every three days for three injections), and collected serum from the rabbits 14 to 21 days after the last injection. Of the control mice inoculated with infective material, 84 per cent developed the disease, whereas only 7.2 per cent of inoculated mice treated with the vaccine contracted the disease.

Schwartz and associates[5] similarly produced a vaccine which would prevent leukemia in C_3H mice inoculated with cell-free brain filtrate from infected mice. Using a mixture of concentrated filtrate and bacto-adjuvant, they obtained immunization by injecting the material subcutaneously three times into rabbits at five-day intervals, and collected serum from the rabbits 10 days after the last injection. About 80 per cent of their control mice inoculated with cell-free brain filtrate or tumor-cell suspension developed leukemia, whereas only 10 per cent similarly inoculated with infective material, but also with the rabbit antiserum, developed the disease.

Immunity in the human being

Perhaps the first concrete evidence that antibodies to cancer can be produced by the human being was offered by Graham and Graham[6] in 1955. With a technic using the complement fix-

ation test, they found that 12 of 48 patients with cancer had circulating antibody to their own tumor. In these cases the titer ranged from 1:16 to 1:128. For some reason difficult to explain, a significant titer was found in six patients only after the tumor had been excised. It was very significant that the patients with antibodies had early lesions, which were readily operable. Patients not having antibodies had far advanced lesions. More recently these same authors report the use of a vaccine made from the patient's own tumor. They mixed a suspension of the patient's own cells (or a whole tumor homogenate) with an equal volume of Freunds adjuvant and injected this into the patient. They reported on the use of this vaccine in 101 patients. There was no adequate mechanism of controlling this experiment, but the authors were definitely of the opinion that many of the patients were improved and had their lives prolonged.

The work of Southam and associates[7] offers fairly good evidence that some type of resistance to cancer is present in most people. They inoculated individuals (their own patients and inmates of the Ohio State Penitentiary) subcutaneously with human cell lines obtained originally from human tumors. These inoculated cells grew in most of the patients having active cancer, but when the cells were injected into young healthy people (prison inmates) they failed to survive in a single person. This indicates that young healthy people possess some type of immune factor which will reject and kill inoculated cancer cells, but patients with advanced cancer do not possess this immunity.

Are predictions possible?

No one is able to predict when a curative agent or mechanism other than surgery and radiation will be discovered. However, data just presented indicating that effective vaccines can be made against animal leukemia give us hope for similar gains in at least one or two types of human cancer within the next few decades.

The increasing amount of data indicating that human tumors are antigenic and that some type of resistance is present in healthy young people likewise makes us optimistic that antibody therapy will some day be effective at least against a few tumors. Although thousands of chemicals have been assayed without any (with the possible exception of methotrexate for choriocarcinoma) appearing to have curative qualities, I feel positive better drugs will be found and that they will be curative against at least a few tumors. However, I doubt that the discovery of a magic pill sufficiently effective to destroy all cancer can be expected for quite some time, perhaps several decades.

REFERENCES

1. Hitchcock, C. R. and Aust, J. B.: Diagnosis of Asymptomatic Malignant Disease. Postgrad. Med. **17**:145-156, 1955.
2. Brown, R. B.: The Value of Periodic Examination in Detection of Early Lung Cancer. Presented at the annual meeting of the American Cancer Society, October 1959. To be published.
3. Shahon, D. B. and Wangensteen, O. H.: Evaluation of Early Diagnosis of Cancer of the Gastro-intestinal Tract. Presented before the annual meeting of the American Cancer Society, October 1959.
4. Friend, C.: Immunological Studies on a Filterable Agent Causing a Leukemia-like Disease in Mice. Proc. Am. Assn. Cancer Res., **2**:304, 1957; Cell-free Transmission in Adult Swiss Mice of a Disease Having the Character of a Leukemia. J. Exper. Med., **105**:307, 1957.
5. Madinos, B. T., Schwartz, S. O., Schoolman, H. N.: Studies in Leukemia: XI Active Immunization of C_3H X 101 Mice Against Induction of Leukemia. Proc. Soc. Exper. Biol. & Med. **99**:222, 1958.
6. Graham, J. B. and Graham, R. M.: Antibodies Elicited by Cancer in Patients. Cancer **8**:409, 1955; Graham, J. B. and Graham, R. M.: The Effect of Vaccine on Cancer Patients. Surg. Gyn. Obst., **109**:131, 1959.
7. Southam, C. M., Moore, A., and Rhoads, C. R.: Homotransplantation of Human Cell Lines. Science, **125**:158, 1957; Southam, C. M. and Pillemer, L.: Serum Properdin Levels and Cancer Cell Homografts in Man. Proc. Soc. Exper. Biol. & Med., **96**:596, 1957.

Practical Aspects of Cancer Detection

*As Seen by a Practicing Physician**

I. PHILLIPS FROHMAN, M.D., *Washington, D. C.*

CANCER detection is cancer diagnosis before the appearance of symptoms. This early diagnosis and early treatment constitute the most logical and most effective approach to cancer control. The doctor's office must become a cancer detection center to the best of the physician's ability and knowledge and with the use and application of established methods.

Cancer detection centers and facilities of various types have been established in many communities, and the methods of early, presymptomatic cancer diagnosis have been extensively tested. Two methods, the biopsy and the cytologic smear, are our most practical office procedures.

Raising the cure rates

Not all cancers are accessible for early diagnosis, and some, although diagnosed early, have already extended beyond the range of curability. In spite of these limitations, striking improvements in cancer cure rates can result from the use of accepted methods of cancer detection and early diagnosis by the practicing physician.

The present over-all cure rate of 30 per cent in cancer of the uterus could very well be raised to 80 per cent; the 35 per cent cure rate of cancer of the breast could and should be raised to 60 to 70 per cent; the cure rate in cancer of the rectum now at a meager 15 per cent could be raised to 75 to 85 per cent; and the insignificant 5 per cent cure rate of cancer of the lung could be raised to 30 to 40 per cent if every practicing physician in this country did an all-out job in performing and advocating cancer detection in his daily work. Such effort should result in an estimated saving of 100,000 lives each year.

The practicability for cancer control and detection by the practicing physician depends upon those methods he can use without the use of very special equipment or group organization. The volume and effectiveness of any cancer detection procedure in the hands of the majority of physicians will depend upon its inexpensiveness and simplicity. We have such procedures.

Available inexpensive procedures

The least expensive of all is the routine history taking, including a review of the family history of cancer, personal history of tumors or exposure to environmental carcinogens, and thorough functional evaluation of each body system. The next inexpensive procedure is use of eyes and hands to see those portions of the body that can be visualized superficially or by the aid of endoscopic instruments, and to feel that which can be palpated.

The physical examination should include inspection and palpation of the skin, lymph nodes, thyroid gland, breasts, adbomen, and genitalia. Examination of the oral, nasal, and pharyngeal cavities and vocal cords should follow; then careful and studied auscultation of the lungs (and heart), bimanual pelvic examination, and digital examination of both the rectum and the prostate gland. Vaginal and cervical cytologic smears should be taken, and a proctologic (proctо-sigmoidoscopy) examination should be done on all patients over 40 years old if possible.

Simple methods of laboratory testing have made it imperative and inexcusable for any practicing physician not to do the following: complete blood count, complete urinalysis especially searching for red cells, and stool specimen examination after two or three days of meat-free diet in the search for occult blood. Roentgenographic examination of the chest should be a

**Presented at the First Illinois Cancer Congress, March 11, 1960, Springfield.*

must for all these patients. Bizarre and nonspecific shadows in the chest film are troublesome to diagnose even by the experienced roentgenologist; therefore the non-radiologist should in all instances have the advice of the radiologist for those films with questionable shadows.

The basic cancer detection examination properly systemized requires about one-half to one hour, depending upon the quality and number of office aides employed. When the physician reviews data from the history, physical examination, laboratory, and x-rays, he will find cancer in one-half to one per cent of his presumably well adults. In older age groups the percentage will be substantially higher.

Fateful waiting

Maximum cancer detection depends first upon a high level of suspicion on the part of the practicing physician. A good rule of thumb would be that any suspicious or questionable finding is cancer until proved otherwise. Don't wait until tomorrow to see what happens to the small mass in the breast, the encrusted hyperplastic area on the side of the nose, a melanoma-like area under the arms or between the toes, or anywhere else for that matter.

Watchful waiting in the field of cancer detection should be as frightening to the practicing physician as would be the watchful-waiting approach to a highly inflamed appendix ready to rupture. Watchful waiting to "see what happens" often permits development of an early and curable cancer into a late and incurable one. Let me caution you that negative diagnostic tests cannot be considered prima facie evidence that cancer is not present in the face of persisting clinical suspicion of malignancy.

At a meeting, such as this one, dealing with cancer detection, a well-known professor of surgery at one of our large Eastern medical colleges and cancer clinics was asked the question, "Should all breast tumors be removed?" He answered, "At our clinic we evaluate breast masses, and then we biopsy or remove the ones we believe most likely to be malignant." We were shocked by this statement! This was a delusion of his professional brain. In my presentation I had stated that all breast masses should be removed for microscopic examination.[1] I told of my patient who had had two previous masses removed from the right breast, both benign cysts, but the third mass in the same breast six years later was definitely malignant. It would have been very easy to pass this third mass off as a replica of the first two — and thereby have a deceased patient rather than the healthy one I have today.

Some physicians believe that they have uncanny ability and fingertips with microscope objectives that enable them to distinguish between benign and malignant masses in the breast. They could not be more incorrect in their self esteem. It is well known, and very unfortunately substantiated by hundreds of reports in the literature, that among those patients with tumors as small as a pea, two-fifths followed for periods exceeding five years eventually died of breast cancer.[2]

Final diagnosis of cancer must always be made by microscopic examination of a tissue specimen. A representative specimen should be obtained from surface lesions by scalpel or cutting forceps. For those lesions below the surface, needle aspiration biopsy can be effective, but it must be stressed that a negative report of a needle biopsy specimen does not rule out cancer. For lesions of the viscera, such as the lung, stomach, rectum-colon, or bladder, biopsy through the endoscope may be successful. In many instances to arrive at a correct diagnosis, exploratory thoracotomy or laparotomy should be performed promptly. These procedures in experienced hands may be the only means of reaching a suspicious lesion or making a correct diagnosis.

Cytologic examination

Cytologic screening of vaginal-cervical secretions, when employed routinely on asymptomatic adult women of all ages, will lead to the diagnosis of cancer in from three to five women per thousand. This is not an insignificant percentage when we consider that we are seeking out a death-dealing disease. Keep in mind that in more than 40 to 60 per cent of proved cases in a screening program, history and physical examination were negative, and that the diagnosis of cancer depended entirely upon the cytologic smear confirmed by biopsy.

About one third of all cancers in women are located in the uterus, and of these, 80 per cent occur in the cervix. Until just a few years ago it was taught that the earliest signs of carcinoma

of the uterus were bleeding between menstrual periods or after menopause, and a watery, serous vaginal discharge. We know now that by the time these signs appear the cancer most likely has been present for a few years. Our important job is to detect cancer of the cervix, or wherever it may be, before abnormal symptoms cause the patient to visit the physician for that specific reason alone.[3]

As a diagnosic adjunct in the presence of symptoms or abnormal clinical findings, cytology affords microscopic study of specimens from lesions that are in a stage too early to be identified clinically or too remote to be reached for biopsy. Much success has been achieved by cytologic examination of exfoliated cells from sputum and bronchial washings,[4] endometrial aspiration, and washings of suspected sites in the gastrointestinal tract.

With the advent of radioisotopes and their use for treatment, diagnosis and research,[5] it was hoped that perhaps here would lie the possibility of a new test for cancer detection. Our expectations for this purpose have not been fulfilled.

The "soft sell"

It is no longer practical nor inteiligent for any of us practicing physicians to wait until the patients come to us with noticeable symptoms before we institute a thorough search for possible cancers in the various sites of predilection in the body. One of my colleagues, quite active in our local cancer society, was shaken with disbelief when I told him that I approach all of my female patients, no matter how trivial their complaint, with these questions: "When did you have your last female examination?" "Have you ever had a cancer test?" And for the male: "How much do you smoke?" "Do you inhale chemicals, dust, or other foreign particles at your job?" "When did you have your last chest x-ray?" And for both male and female: "When did you, if ever, have a complete physical checkup?" These questions are being asked quite casually while I am in the process of writing a prescription or two for a simple head cold, a sprained ankle, or an upset gastrointestinal tract. In nearly fifty per cent of the patients thus approached I have been allowed to do further examinations at the same visit, or the patient will agree to an early appointment for a physical examination including laboratory workup, chest x-ray, and cytologic examination of the cervix. Most of you here probably already use this approach, but for those who are backward in the art of medical salesmanship, forget your bashfulness and try this approach. You will be happily astounded at the number of your patients who were just waiting for you to make the "soft sell" for good medical care.

We physicians must be practical. We must suggest and insist upon good medical care and cancer diagnostic tests for our patients for their own good. In so doing we may find our one half to one per cent of cancer, and also many patients with secondary anemia, cystitis, pyelitis, occult blood in the stool, diabetes, tuberculosis, enlarged hearts, cervical erosion, fibroid and other tumors of the female genital tract, hernias, and many supposedly innocuous conditions.

Examinations for children

So much has been written in the literature or presented at medical and cancer meetings, as we are doing here today, dealing with cancer in adults of middle age and beyond, that at times we physicians lose sight of the fact that we must forever consider the cancer-potential in the pediatric portion of our practices.

Cancer and accidents now comprise the two leading causes of death in children beyond the age of two years. Antibiotics and public health prophylactic measures have reduced the toll of infections and infectious diseases in childhood. Cancer, including leukemia, is responsible for approximately 12 per cent of all deaths in children between the ages of 1 and 14 years. The apparent increase in the incidence of childhood cancer is in part the result of decreased mortality from infectious diseases, particularly pneumonia, tuberculosis, meningitis, and diphtheria. There is also evidence of an actual increase in incidence of childhood cancer, particularly leukemia.[6]

The high frequency of malignant tumors found at birth or before the fifth year of life suggests the embryonal nature of the more common juvenile tumors, such as Wilm's tumor, medulloblastoma, and neuroblastoma. Heredity is another factor in the origin of these congenital tumors, and the importance of counseling parents cannot be discounted. Retinoblastoma is one example. Persons who have survived retinoblastoma are likely to have children with bilateral retinoblastomas. Yet later offspring of unaffected

parents who have had one child with retinoblastoma show no greater tendency to be born with this affliction than other children in the general population.

Physicians who treat infants and children, the general physician and the pediatrician, must keep in mind the sites of predilection of cancer in youngsters since these sites differ greatly from those in adults. The common sites of malignant neoplasms are the hematopoietic system, the adrenal gland, bone, kidney, soft tissues, and the central and sympathetic nervous systems, including the eye. Sarcomas occur far more frequently in children than do carcinomas. Rare in early life are the epithelial tumors of the adult, such as carcinoma of the lung, breast, stomach, skin, or uterus.

It behooves us to remember also the general area of the four major groups of the highest incidence including the malignant lymphomas (leukemias, Hodgkin's disease, lymphosarcoma), central and sympathetic nervous system tumors (glioma and neuroblastoma), bone tumors (osteogenic sarcoma and Ewing's tumor) and genitourinary tumors, particularly Wilm's tumor).[7] Each of these tumors appears most frequently in a special period of childhood. Intracranial neoplasms reach their peak incidence between the ages of 5 and 10 years, whereas more than one half of the cases of childhood leukemia occur before the age of 5 years.

Malignant tumors in childhood in many instances arise in the more superficial layers such as the dermis, subcutaneous fat, and skeletal muscles. The presenting feature may often resemble that of a solid mass. Even with large malignant growths, however, anemia, weight loss, and cachexia are not usually prominent. Symptoms arising from childhood malignancies may develop insidiously or precipitously. There may be an acute fulminating onset with tumors of the thoracic cage, the skull, or abdominal cavity. The clinical picture may suggest an acute infectious process. When leukemic cells have invaded the bone marrow, anemia, pallor, fatigue, hemic murmurs, ecchymosis, purpura, and petechiae may be representative of some of the prominent signs and symptoms. There may be enlargement of the liver, the lymph nodes, kidney, or spleen. Mesenteric adenitis, intussusception, and fracture of a vertebra are some of the clinical forms which leukemia may assume.

Therapy, to be effective, depends upon an early diagnosis before irreversible changes or extensive damage has occurred. It is imperative that the physician bear in mind the possibility of malignancy in any child presenting atypical signs and symptoms, especially those that do not fit any particular disease or entity. The solid mass found in the infant or child, as in the adult, must be considered a malignancy until proved otherwise!

A simple general cancer detection test to screen large population groups has not yet been devised. In its absence, effective and practical cancer detection depends upon the thorough examination of the individual patient by established clinical methods and techniques. Many a presumably healthy adult will prove to have minimal symptoms he does not regard as significant. The routine examination brings them to medical attention weeks or months before he would otherwise have sought it.

Educating the patient

Clinical studies and reports substantiate the fact that the vast majority of cancers occur between the ages of 40 to 60 years; therefore it behooves the physician to educate this group of patients in the practicality of routine complete physical examinations each year. It is most important to teach our patients (1) that the initial complete examination with perhaps minimal or negative findings does not establish good health for the next ten or fifteen years, (2) that the routine examination becomes more important as the patient ages. The normal findings during the initial examination enable the physician to detect any slight variation found subsequently. This is, I believe, the most important single practical aspect in cancer detection as we know it today.

REFERENCES

1. Frohman, I. P.: The Role of the Private Physician in the Detection of Cancer of the Breast, Connecticut Med. 23: 447-449 (July) 1959.
2. Kreyberg, L. I.: The Significance of "Early Diagnosis" in Breast Cancer. A Study of Some Common Usages of the Term, Brit. J. Cancer 7:157-165 (June 15) 1948.
3. Frohman, I. P.: Cancer of the Cervix and the General Physician, Med. Ann. District of Columbia 24:539-542 (Oct.) 1955.
4. Frohman, I. P.: The Role of the Private Physician in the Detection of Cancer of the Lung, Connecticut Med. 23: 443-446 (July) 1959.
5. Frohman, I. P.: Radioisotopes and the General Physician, GP 18:75-78 (Oct.) 1958.
6. Vital Statistics of the United States 1956, Vol. 2, National Office of Vital Statistics, U. S. Public Health Service, 1958.
7. Ibid.

Pathological Aspects in the Detection of Cancer of the Lung

EDWIN F. HIRSCH, PH.D., M.D., SC.D.,* *Chicago*

PATHOLOGISTS in practice during the past forty years have observed the incidence of carcinoma of the lung increase from the time when the disease was encountered as a curiosity in necropsy examinations to now when it is one of the most frequent of the cancerous diseases. Now pathologists in large hospitals examine many biopsy and other surgical tissues in which a real or suspected carcinoma of the lung is the diagnostic problem. Before the advent of the bronchologist with his bronchoscopic instruments, clinicians and pathologists were obliged to approach the diagnosis of carcinoma of the lung with technics similar to those of a guessing game. Tissues submitted for diagnosis usually were those of a metastasis, and from their structure the site of the primary focus was postulated as probably the lungs. Since then, means for diagnosis have been improved by bronchology, radiology, pathology, clinical observation, and interpretation. An earlier diagnosis of primary lesions has followed a general awareness of the prevalence of the disease. Diagnosis stimulated technics for therapy, notably the partial or the complete removal of a diseased lung.

These surgical technics have advanced far beyond the first successful pneumonectomy by Evarts A. Graham; now segmental or complete lobectomies and pneumonectomies by surgeons with special training are common procedures in many hospitals. The pathologists of my generation have participated, at times gropingly, in this progress in the diagnosis and treatment of carcinoma of the lung.

Comments on pathological aspects should be prefaced by some general remarks. Prevailing opinions regard carcinomas of the lung as bronchogenic; that is, they arise from epithelium in the lining or deeper portions of the wall of a bronchus or bronchiole. These cancers occur at any age, but more frequently after 40 years, and in men more often than in women. Chronic cough, pain in the chest, hemoptysis, and purulent sputum are the usual complaints. The first clue may be an abnormal shadow in a routine roentgen film of the chest. Sometimes specific symptoms of the primary focus are minor while those of a metastatic growth are dominant. Local growth of bronchogenic carcinoma produces an obstruction of the bronchus beyond which secretions and exudates accumulate. Bronchiectasis, infection, and necrosis of peripheral lung tissues follow. Hemorrhages in the tumor or infected lung tissues cause hemoptysis.

Through metastases the disease spreads into many tissues: the pleura; the hilar, mediastinal and cervical lymph nodes; the bones, brain, liver, suprarenal glands, kidneys, and elsewhere. Symptoms that metastases produce sometimes bewilder the clinician, and tissues of a secondary growth removed for microscopic study bring the pathologist into the diagnostic problem.

Many bronchogenic carcinomas are near the hilus of the lung but may be at any level to the periphery. They range greatly in size. A bulky tumor casts a large shadow in roentgen films, and the bronchus from which it develops is like a stalk, capped by the carcinoma tissues. Necrosis in the tumor with erosion of blood vessels causes hemorrhages. Hilar carcinomas generally are limited in size from one to several centimeters. They are gray, firm or soft, depending upon the proportions of stroma and epithelium involved. Firm tumors have marginal fibrous radiations into the parenchyma. The lumen of the bronchus is narrowed by extensions of tumor tissues or the

*From the Henry Baird Favill Laboratory, Presbyterian-St. Luke's Hospital, Chicago.

Read at the First Illinois Cancer Congress, March 9, 1960.

thickening of the wall. Longitudinal folds and grooves of the lining are replaced by granular or nodular tissues.

Small bronchogenic carcinomas are warty thickenings or scarcely elevated tissues of the lining; yet they invade the lymph channels of the lungs and produce extensive metastases to the pleura and other viscera, the bones, and brain. Pleura metastases form many gray fibrous plaques, a condition years ago named "multiple endotheliomas of the pleura" because the primary carcinoma was overlooked. When a carcinoma arises from epithelial tissues deep in the wall of a bronchus, the lining may have no grossly detectable change; but the walls of the bronchioles are diffusely thickened and histological examinations disclose an extensive invasion of the peribronchial lymph channels.

Carcinoma cells grown into the pulmonary artery can produce multiple embolic metastases in one or both lungs, a form of focal pulmonary adenomatosis. Small polypoid carcinomas in the parenchyma of the lung neither cast shadows in roentgen films nor cause changes detectable by physical examination; their metastases may produce bizarre focal symptoms in other tissues of the body and systemic reactions.

Hilar carcinomas spread into the mediastinum, compress the pulmonary blood vessels, encroach upon the heart, and even erode the esophagus. Compression of the pulmonary artery or veins impedes circulation of blood in the lungs and seems to be the main cause for the dyspnea of some patients with lung carcinoma.

Invasion of the lymph channels and of the blood vessels in the lungs permits widespread dissemination of the tumor into many body tissues. These secondary growths can cause symptoms that dominate the illness of the patient: those associated with the primary tumor in the lung remain insignificant. The bizarre clinical symptoms in these patients present an enigmatic disease. Should a metastatic growth, approachable by biopsy procedures, be discovered and examined during the life of a patient, a clue of the nature of the disease is obtained. Otherwise, the bronchogenic carcinoma is revealed only by a thorough postmortem examination.

Diagnosis of carcinoma of the lung in final analysis is by the microscopic examination of tissues obtained as a biopsy or of tissues removed by surgical excision. The usual biopsy tissues

Figure 1. Granular surface of a small hilar carcinoma of the upper lobe bronchus.

Figure 2. A carcinoma near the hilus of the lung associated with necrosis of the regional peripheral tissues of the lung.

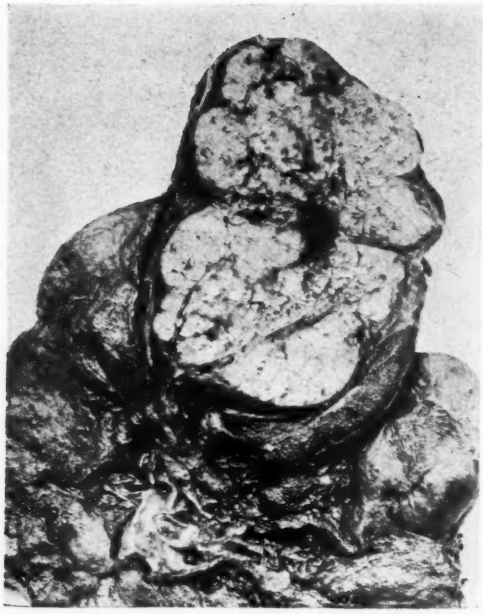


Figure 3. A bulky carcinoma of the lung.

obtained from the lungs for the detection of a cancer are bronchial secretions, including sputum, bronchial tissues, and pleural fluids. Excepting for the simple collection of sputum, the samples for examination are obtained by surgical procedures. The secretions and biopsy tissues are taken from the air passages by the bronchologist.

The small volume of the secretions and the limited amount of the biopsy tissues removed demand modifications of the usual technics required for processing tissues in order to guard against the loss of even a small particle. In practice, occasionally, the smallest piece in the sections is the only one with the significant tissue for diagnosis. The best results in these diagnostic procedures are realized when the technics of the bronchologist are closely integrated with the processing methods required by the pathologist. Those pathologists who choose to examine secretions spread in thin films on slides and suitably stained may do so. For me, however, the following work arrangements between bronchologist and pathologist have been used with advantage for many years.

Secretions

Secretions are aspirated directly into an ordinary tapered 15 cc. glass centrifuge tube. Zenker's solution (or other fixative solution) is added to adequately fill the tube which then is closed with a rubber stopper. A strip of surgical tape bearing the name of the patient is attached, and with a requisition the tube is sent to the laboratory.

Biopsies

Particles of biopsy tissues are placed at once in a tapered 15 cc. centrifuge tube. A cubic centimeter of saline solution in its tip will aid in releasing the tissues from the instrument. The fixative solution is added, in sufficient amounts, the tube stoppered, labeled properly, and sent to the laboratory.

Zenker's solution precipitates the formed and dissolved tissue elements in the secretions and promptly fixes the biopsy tissue particles. After two to four hours, the precipitates or tissues are collected by centrifugation in the tip of the tube and the fixative is decanted. The entire process of dehydration, clearing, and paraffin embedding is carried out in the original centrifuge tube. After each change of water (for washing), 70% alcohol, 80% alcohol, 95% alcohol, two changes of absolute alcohol, two changes of xylol or toluol, the secretion precipitates or tissues are collected in the tip portion of the tube by centrifugation and the solutions are decanted. Finally, melted paraffin is added to the tube, and the infiltration of precipitates and tissues with paraffin is carried out by placing the tube and its contents in a paraffin oven. Two changes of paraffin suffice. A short piece of flexible copper wire with a loop at the end reaching

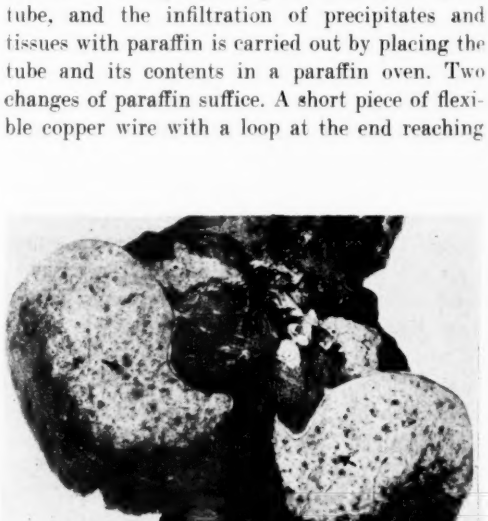


Figure 4. A pseudopneumonia form of lung carcinoma.

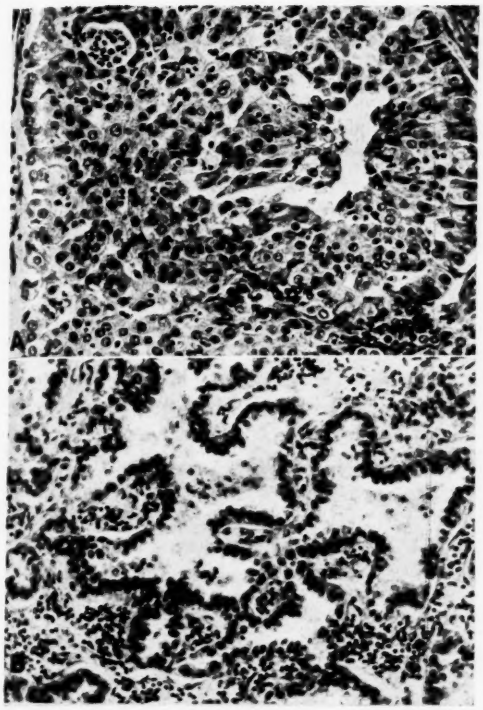


Figure 5. Photomicrographs illustrating (A) mosaics of pavement-like carcinoma cells described as squamous or epidermoid and (B) an alveolar form with a columnar cell lining.

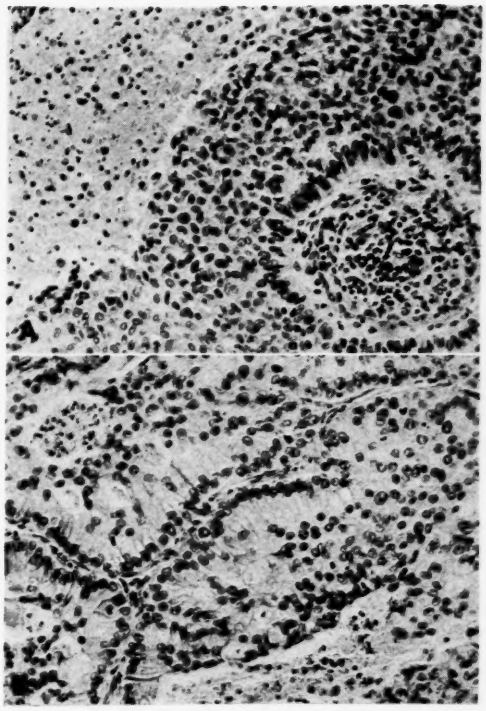


Figure 6. Photomicrographs illustrating (A) mosaics of carcinoma cells around a core of vascular fibrous tissue, and (B) cords of columnar cells with a scanty supporting stroma.

into the melted paraffin is hung over the lip of the centrifuge tube, and the tube cooled to harden the paraffin. Then the tube is dipped quickly into warm water and by means of the wire, the column of paraffin is drawn from it. The short button of infiltrated tissues at the tip is cut off and embedded in melted paraffin, cooled, and blocked for sectioning.

The sections are cut serially, enough to cover at least five slides, stained with hematoxylin and eosin, and mounted for miscroscopic examination.

In this way, all of the secretion precipitates and the biopsy tissues are conserved.

Pleural and other fluids

The sediment obtained by centrifugation of pleural or other fluids and collected in a 15 cc. tapered centrifuge tube is fixed with Zenker's solution, and the precipitate is processed in the tube as already described. Sufficient amounts of a fluid, 250 cc. if necessary and possible, should be used to obtain an adequate sample.

Cell forms

The histologic structure of bronchogenic carcinomas ranges widely. Many have pavement-like cells arranged in mosaics and described as squamous or epidermoid. The cells simulate those of a squamous epithelial mucosa. Accordingly, some tumors have large pavement cells with hornification and even pearl formation; others have smaller cells without hornification, and still others have cells corresponding in size to the deeper layers of a mucosal surface. The amount of supporting fibrillar stroma with inflammatory exudates varies; the scirrhus tumors have considerable, the medullary have less. Another group of carcinomas has small cells that resemble those in the deeper portions of the pseudostratified lining of a bronchiole. They have a scanty or a more abundant basophilic granular cytoplasm and a vesicular nucleus with several coarse chromatin granules. The supporting stroma in these cellular tissues is small in amount. The small cells resemble lymphocytes

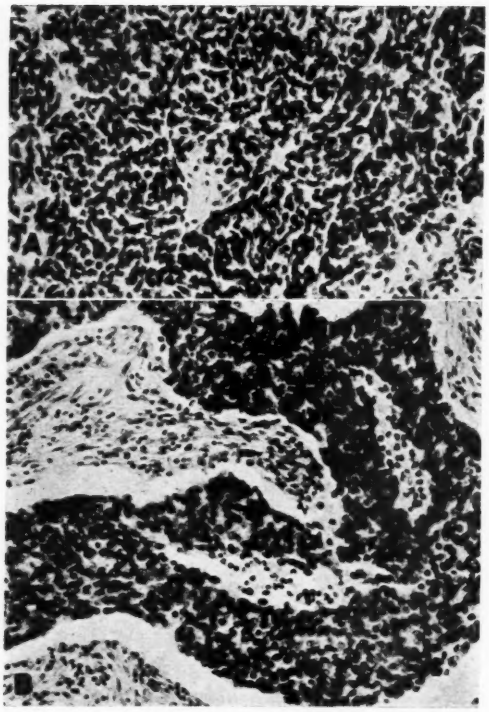


Figure 7. Photomicrographs of (A) small cell structure and (B) a larger cell form of lung carcinomas.

and sometimes because of growth conditions they are elongated and are designated as "oat cells."

Some carcinomas have cells arranged in tubules or acini; others are papillary. Occasionally the tumor has masses of "signet" cells, characteristics that indicate an origin in mucus-secreting epithelium. A few tumors have small cells repeating the structure of those lining crypts in the wall of the main bronchus. Other transitions in cell form complicate attempts to classify in detail some of these carcinomas on the basis of their histologic structure.

Despite the advances made through the technics of bronchology in the diagnosis of bronchogenic carcinoma, tissues of some carcinomas and other tumors of the lung are not obtainable through aspiration of secretions or biopsy material. The clinician then relies on his experience, the clinical data of his patient, roentgen films and even surgical exploration. The latter procedure introduces another source of tissues for examination, many of them submitted for immediate diagnosis in sections prepared by the freezing method. Some of these operations are originally intended to be or later become extensive procedures. The diseased tissues removed do not always have carcinoma, but may be the chronic granulomas of tuberculosis, blastomycosis, and histoplasmosis; other specific and non-specific inflammations; infarcts of the lung; benign tumors; metastatic carcinoma or sarcoma; lymphosarcomas and other sarcomas. Other tumors of the bronchus or lung appearing in biopsy tissues are the cylindroma and adenoma, and forms of so-called pulmonary adenomatosis (carcinoma).

Importance of pathologist's role

These comments emphasize that the pathologist requires a large general experience in tissue pathology when confronted with biopsies of the lung that may contain carcinoma. The bronchologist, probably more than any other specialist, depends upon the technical services and the professional skill of the pathologist in the practice of his specialty. He and the pathologist constitute a team in medical practice which today is required to evaluate and specifically diagnose lung disorders that may be carcinoma. The important goal is to diagnose cancer before it goes beyond the curative stage.

Cancer of the lung now leads all other cancers as a cause of death in men. The American Cancer Society, in its report of 1960, has accepted the evidence that cigarette smoking is a causative factor in lung cancer and has adopted measures to inform the public of the hazards of this habit. Preventive medicine is always more desirous and effective than is the therapeutic.

Subphrenic Abscess

CLINICAL-SURGICAL CONFERENCE

DEPARTMENT OF SURGERY, COOK COUNTY HOSPITAL

MODERATOR:
Robert J. Baker, M.D.
Associate Director, Department of Surgical Education, Cook County Hospital

DISCUSSANTS:
Manuel E. Lichtenstein, M.D.
Associate Professor of Surgery, Northwestern University Medical School; Chairman, Department of Surgery, Cook County Hospital; Professor of Surgery, Cook County Graduate School

Robert Jensik, M.D.
Clinical Associate Professor of Surgery, University of Illinois College of Medicine; Attending Surgeon, Presbyterian-St. Luke's Hospital

DR. ROBERT BAKER: The patient who presents a picture of acute or chronic toxicity and sepsis following either an abdominal catastrophe or elective upper abdominal surgery may have a complication dreaded by all surgeons. The diagnosis of subphrenic abscess demands an astute clinician with a high index of suspicion directed toward this site for early discovery and effective management.

Unfortunately, this complication is often unrecognized for some time, and, more unfortunately, it may prove fatal. Type and timing of treatment requires judgment and experience, and we are happy to have two discussants eminently qualified in both spheres.

Dr. Manuel E. Lichtenstein is from Cook County Hospital and Northwestern Medical School; our guest is Dr. Robert Jensik of the University of Illinois College of Medicine and Presbyterian-St. Luke's Hospital. We are delighted to have the benefit of their opinions in the management of this perplexing problem.

Case 1

DR. COOKSEY, surgical resident: A 45 year old white male was admitted to the surgical service of Cook County Hospital with a 48-hour history of abdominal pain, generalized, of sudden onset, and severe enough to "double him up." This pain was constant and progressive. He had had a history of heavy ethanol intake for several years, with "some stomach trouble" accompanying these bouts.

On admission, his blood pressure was 60/40 mm. Hg, pulse rate 140 per minute, temperature 101°F. rectally. He was cold, clammy, and in clinical shock. His abdomen was boardlike with no bowel sounds, and was extremely distended. Hematocrit was 55%; specific gravity of the urine 1.032. Roentgenograms of the chest and abdomen showed a large amount of free air under both diaphragms (fig. 1).

After preparation with plasma, fluids, and antibiotics, the abdomen was opened under local anesthesia and a perforated duodenal ulcer was closed. About 2½ liters of bile-stained fluid was aspirated from all quadrants of the abdomen, and the patient left the operating room in fair condition.

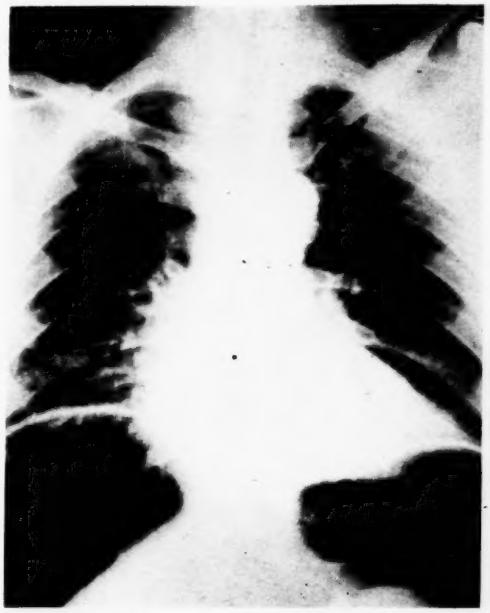


Figure 1. Massive pneumoperitoneum in 45 year old man with perforated duodenal ulcer and pelvic abscess.

Postoperatively a wound infection that developed was drained. Considerable subcutaneous emphysema was noted in the area of the incision, though the incision was not red nor particularly tender. The patient had a very stormy course marked by irregular temperature spikes, intermittent ileus, and drainage of a pelvic abscess. Cultures of both pelvic abscess and wound yielded *Diplococcus pneumoniae*. The patient did fairly well until the thirty-third postoperative day when he suddenly became very dyspneic, orthopneic, and began to cough up large quantities of creamy, purulent material with a slate gray color.

DR. BAKER: This patient presented himself in a critical state with a perforated peptic ulcer, which was closed and the abdomen drained. Postoperatively the patient accumulated pus in the pelvis, and probably elsewhere. He seemed to be doing well and x-rays were obtained, which we will see now.

DR. WILLIAM MESZAROS: The first film was taken 10 days postoperatively. There is some haziness throughout the entire abdomen, and large loops of dilated small bowel are seen in the left upper quadrant. Whether this represents incomplete small bowel obstruction or paralytic ileus would be hard to say, but I would suspect paralytic ileus secondary to some abscess in the left upper quadrant, although we do not see a fluid level.

In this film (fig. 2), there is a fluid level in the left upper quadrant which could be a gastric air bubble or an abscess containing gas. Both costophrenic angles contain fluid. This was taken 12 days postoperatively and 2 days after the pelvic abscess was drained. The major fissure in the right lung field, interestingly enough, is accentuated by fluid collected there. On a left lateral view of the chest (fig 3), we see the air-fluid level more distinctly.

This film (fig. 4) is a right lateral decubitus and makes the diagnosis certain. An air-fluid level in the left upper quadrant, separate from the stomach, is seen well in this projection. There is, then, a subphrenic abscess in the left upper quadrant.

DR. BAKER: This patient was known to have a left subphrenic abscess, but he was doing very well. He had just had drainage of the pelvic abscess, and it was felt that we could temporize to see how he got along, hoping as we were for

Figure 2. Upright PA chest film, taken 10 days postoperatively. A widened major fissure in the right lung field is noted.

spontaneous remission. However, he did not allow us to wait long. He became cyanotic and coughed up large quantities of the same kind of material as had been obtained from the pelvic abscess.

Dr. Jensik, the patient at this stage of his illness presented primarily pulmonary symptoms. We would appreciate your views on the problem as now manifested.

DR. JENSIK: As a consultant would say, the history and physical have been reviewed. This patient had a serious thoracic complication, and it seemed that he solved it himself by spontaneous drainage.

Going back into the case from the etiologic aspects, there is no question that the field was ripe for the development of this subphrenic abscess. He had a perforated ulcer with a draining wound and subsequent pelvis abscess drainage. The problem of a chest complication is unusual, because at no time on x-ray was there evidence of an effusion of consequence. Of all of the complications of subphrenic abscess, the most common is pleural effusion. This is understandable because the lymphatics supplying the dia-

Figure 3. Left lateral chest film, showing posterior airfluid level below the diaphragm.

phragm drain upward, so that at least *half* of the cases will have pleural effusion. Whether this effusion goes on to suppuration depends on how virulent the infection is, and how massive.

In this patient we cannot demonstrate significant effusion, and this brings up the question of emphysema that was mentioned. We are told that when the wound was drained, there was considerable subcutaneous emphysema. This bothered me from the standpoint of whether it was a hallmark of the type of organism that is producing the clinical picture here.

The second thing I wondered about is, does he have an old obliterative pleuritic process making his lung adherent to the diaphragm? Was there enough erosion so that there was beginning inflammatory and destructive processes on the posterior surface of the diaphragm, and consequently air found its way to the subcutaneous tissue in that fashion? Then did a large defect develop so that he evacuated the entire abscess through the tract? The most disturbing thing is the large major fissure on the right side which makes you think of a right air pocket or collection of fluid. Was that just fluid in the right pleural space?

DR. MESZAROS: There were good lung markings. A chest film taken later makes it clearer, for, at that time, the interlobular process is gone. He did have some fluid in the costophrenic sinuses, however.

DR. JENSIK: Even at this time it is remarkable that he has so little reaction. There is no large accumulation of fluid, and I think he must have had enough sealing of the diaphragm and lung to maintain a synechia so that he just evacuated the abscess into a bronchus. That is unusual because whenever we have seen patients with subphrenic abscess, it is the pleural component that is outstanding. The thing that causes concern is whether this is pus or inflammatory effusion in the pleural space above the left diaphragm. What we want to know at the present time is how much the patient coughs, how much he expectorates, and does the bronchoscopic examination show all this coming from the left side? Did he have Lipiodol® or contrast study to show structures of the bronchial tree?

DR. BAKER: His cough subsided completely in about two days, and he now expectorates almost nothing. He has been too ill for bronchograms so far.

DR. JENSIK: Now I would like to say something about differential diagnosis. When you see

Figure 4. Right lateral decubitus film (with the right side down) showing classical air-fluid level of subphrenic abscess.

a patient who coughs up all this purulent material, you must think, first, of abscess in the lung. This is, possibly, an embolic phenomenon. He had reason enough for that, if you postulate a septic embolus to the lung which broke down and caused suppuration. Here we have not had an actual solitary mass with liquefaction and abscess formation. Secondly, one must think of empyema with bronchopleural fistula, but there is little evidence of empyema on x-ray. Then, one must think of bronchiectasis, but ordinarily that has a longer duration of symptomatology and seldom the sudden massive evacuation seen here.

DR. BAKER: This patient was in dire straits. He was taken to the operating room and bronchoscoped. Copious quantities of material were evacuated from the tracheobronchial tree, perhaps somewhat more from the left side. He was then placed on the operating table and a left lateral subcostal incision was made because he had a mass palpable in the left upper quadrant. From the abscess, which was on the left, both subdiaphragmatic and subhepatic, 1000 cc. of purulent material was obtained which was identical to that he had been expectorating. Penrose drains were placed into the abscess cavity, and the patient improved overnight.

Two days after drainage he was vastly improved, and we tried to demonstrate the fistulous tract with Lipiodol introduced into the drain site in the left upper quadrant, but neither dye nor saline could be introduced into it. We think the fistula is probably closing, or has already closed. The patient was very ill, but his improvement has been gradual and impressive. The first drainage site was in the left lower quadrant and is still not completely closed. Incision for the abscess was made over the area of presentation of the mass. A chest x-ray was obtained yesterday and was completely unremarkable.

DR. MANUAL E. LICHTENSTEIN: There are some interesting points to be made about this case. One of the cliches we hear is that if a patient comes in 24 hours, or later, after perforation of an ulcer, he should not be operated on. Another cliche is, if a patient comes in with acute pancreatatis he does not need an operation. Sometimes these two statements may be true, but they do not hold for all patients in either category. The patient whose ulcer perforates and who is hospitalized after 24 hours is not operated on if it can be demonstrated that the perforation has already sealed over, the presumption being that if you open the abdomen you will not find the site of perforation. To find that opening, you would have to remove the plastic exudate that had formed and then put in sutures to simulate the exudate that had already sealed the hole. But what about the patient whose ulcer has perforated and who has boardlike rigidity, in whom there is no improvement, and in whom the abdominal distention becomes greater? This individual may have a low blood pressure, rapid pulse, elevated temperature, infection, marked dehydration, with specific gravity of the urine of 1.032, and a large amount of air in the peritoneal cavity. He needs to have this material evacuated. It was demonstrated at this institution that when a patient perforates an ulcer and is operated on within 6 to 8 hours, cultures of the peritoneal content are usually sterile; however, after 24 hours many organisms are present in the peritoneal cavity, and the patient needs drainage.

There is another cliche: The treatment of peritonitis is removal of the focus or closure of the leak. That covers perforation and infection, like acute appendicitis; but what about the patient whose perforation is not leaking? He must have drainage of all of this septic material established lest it infect in local areas as it did here. When I was a medical student at Rush Medical College, Dr. Ernest Bevan used to speak on this very subject, and he did this: He opened the abdomen, closed the perforation, placed a drain suprapubically and poured large quantities of saline solution into the peritoneal cavity to wash out the peritoneal content, and it would flow down into the pelvis and then be sucked out. The drain stayed in until the rest of the wound was closed. In this manner he was able to reduce the incidence of subphrenic abscess, and he already had drainage of the pelvic abscess. All this was accomplished in the days before antibiotics, and before blood banks and plasma. Blood transfusions were hard to obtain, and cross matching was not perfected; but good results were still obtainable. We must remember, however, that the mortality rate in perforated ulcers after 24 hours was very high, and washing out the peritoneal cavity was a useful procedure.

I would compliment the staff who worked on this patient inasmuch as he was not taken directly, in his state of shock, to the operating room

to have a long incision made to explore for the trouble. He had a small incision directly over the most likely site of perforation, which was found and closed. He had a long period of preparation with plasma and fluids to make it possible for him to survive even the minor operative trauma necessary to close the hole.

No drains were put in this abdominal cavity, but here is a case where you have a lot of fluid free-wheeling in the peritoneal cavity; it is 48 hours old and it can be assumed to be infected. It is not likely that a large dose of any antibiotic can sterilize that rapidly. It might have been a good thing to drain the suprapubic space or pelvis by putting in a tube and sucking out the material; it also would have been helpful to put in a Chaffin tube and aspirate the material, maintaining continuous suction to get rid of the bulk of the septic material which subsequently was responsible for the difficulty he had.

DR. BAKER: Dr. Jensik, do you think the reverse of this situation ever occurs, that is, does empyema lead to subphrenic abscess?

DR. JENSIK: It has been reported, but I have not seen this, that is, empyema penetrating the diaphragm. In empyema, usually the pus breaks through into the lung; this is the commonest and easiest direction for it to take. It is interesting to me to see this normal looking chest on the subsequent x-ray film. I would like to see bronchograms to determine whether or not there is a residual change, but I think he could have a normal bronchial tree on the left side and may not require anything more than healing of his abdominal wound.

DR. BAKER: Serous effusion as seen here is a consequence of the lymphatics carrying the infection into the subpleural area from the subphrenic space. That must ordinarily be a unidirectional route of spread.

DR. JENSIK: This spread probably could be both ways, but it is more commonly seen going upward than downward. Perhaps five per cent of infections go downward below the diaphragm from the pleural space (empyema), but it is much commoner to see the reverse.

DR. BAKER: There was some discussion about draining him posteriorly through the bed of the twelfth rib, the Ochsner route. Suppose that in draining an abscess you inadvertently entered the pleural space; what would be your management in such a case?

DR. JENSIK: If it is unavoidable, you would have to try to suture the pleura to the diaphragm to wall off that entrance. It would be very wise also to insert a transpleural catheter and maintain closed drainage in addition to having drainage of the abscess pocket. Then, in case there has been infection of the pleural space, it is closed around the catheter, and can drain.

DR. ROBERT J. FREEARK, director of surgical education: Suppose you have a patient about 7 days postoperative who has severe contamination and a stormy course, and who has a clouded left or right costophrenic space, is running a temperature, has some chest findings, and it isn't known whether the density in that area is left lower lobe pneumonia, or effusion, or abscess and effusion. How about needle aspiration for purposes of diagnosis—desirable or hazardous?

DR. JENSIK: This is a real enigma — trying to make a decision as to the alternatives. I don't hesitate to use a needle, but I am very cautious. I insist that the aspiration be high to determine whether the pleural component of this inflammatory process is actually effusion or pyogenic material. If aspiration is done low, you may go right through the diaphragm; and if there is an abscess, you may enter it; then, when you withdraw the needle, there is contamination, during which you may spread the process from below the diaphragm to the pleural space. I would use the needle only to determine whether there has been a change, or formation of pus in the pleural cavity.

QUESTION: Do you feel that in exploration, after finding and closing the perforation, washing the abdominal cavity with antibiotics has any place?

DR. LICHTENSTEIN: This is not a question that is *de novo*. They have been pouring things into the abdominal cavity for years. In earlier days when an appendectomy was completed, we poured sulfa powder into the peritoneal cavity; later, we had patients with intestinal obstruction, and the site of obstruction was where the sulfa crystals had matted together. Next, they put soluble agents in the peritoneal cavity, fluids were poured in from the peritoneum, and still the concentration was below the level of the therapeutic dose. The fact is that the mechanical cleansing is the basis for preventing infection.

I would not say that every patient who has a perforation should have irrigations done, but

that is the difficulty in considering such a problem. If an author mentions that such and such a type of treatment should be used in a particular case, someone is liable to read or hear only part of the sentence and he will say, for instance, that the County Hospital recommends that in every case this treatment should be used. But it is not recommended in every case; it is recommended now in the case that is more than 18 to 24 hours old where there has been no sealing off of the perforation. Most of such patients probably don't have to be operated on because the leak has already been sealed, and you are waiting for an abscess to develop. Antibiotics have done the most good in such cases because they can prevent development of an abscess. They have decreased the amount of surgery necessary in this condition; it is only in particular cases that you irrigate out this fluid as you would irrigate out a contaminated wound, and then leave Chaffin tubes as drains where you expect collections of fluid. I would give all the antibiotics intravenously or intramuscularly so that the circulation would be saturated, and there would be no chance of getting septic or embolic phenomena.

QUESTION: What about the case that is less than 24 hours old and the patient has eaten a large meal and has massive spillage for a time?

DR. LICHTENSTEIN: You can irrigate that abdomen too, but usually healing has begun. How large is this hole, as a rule? Soup would come out of it, of course, but spinach would plug it up. The extravasated material is sterile, and, if you operate on this patient within six to eight hours, it is not necessary to irrigate. You can aspirate the fluid that is present, but when large quantities have come out or a long enough period of time has elapsed not only to permit the materials from the stomach to leak out but for the bacteria to grow, those patients need your extra attention.

DR. BAKER: This patient had a large air-fluid level which was more posterior than anterior and yet his mass was anterior. It was one large abscess, despite the location of the air-fluid level.

DR. LEO ZIMMERMAN: There is only one subphrenic space on the left side and two spaces on the right. If the mass pointed posteriorly I would drain it posteriorly. If it were a smaller abscess and I did not know where it was, I would have gone in anteriorly; but always remember there is only one subphrenic space on the left side.

DR. FREEARK: Would you place the drain where it pointed?

DR. ZIMMMERMAN: Yes. Place the drain where the pus is.

Case 2

DR. MARVIN TIESENGA, surgical resident: This patient was a 22 year old Negro male admitted to the surgical service of the Cook County Hospital with a gunshot wound of the abdomen inflicted four hours prior to admission. The wound of entrance was located in the right upper quadrant just below the costal margin, but no exit wound was visible. His pulse and blood pressure were stable, and the abdomen was tender but not rigid. Roentgenograms disclosed the projectile at the level of the body of L-5 and a fractured left transverse process of L-4.

The patient was explored through a right paramedian incision. A through-and-through wound of the right lobe of the liver was seen, the projectile's path having continued caudally just below the inferior pole of the right kidney. No other vital structures were injured. Gelfoam® was placed over the holes in the liver and the wound was closed with drainage, using four Penrose drains into Morrison's pouch. Drainage was minimal and all drains were accidentally removed on the fourth postoperative day. The patient daily continued to spike a temperature to almost 102°F. rectally, and his progress was only fair. Fluoroscopy of the chest showed that both hemidiaphragms moved, the right not as much as the left. Tenderness and guarding developed in the right upper quadrant.

DR. BAKER: This patient presented a difficult problem postoperatively in that his temperature never really came down, as we would have liked it to in the face of minimal drainage. The drains had been removed, unfortunately, on the fourth day, and on the sixth day he had severe pain in the right upper quadrant lateral to the incision with some tenderness and fever. X-rays were taken which Dr. Meszaros will discuss.

DR. MESZAROS: On this film taken seven days postoperatively, you can see the haziness in the right upper quadrant (fig. 5). It brings up the point that you do not always have air-fluid levels in subphrenic abscess. I think we see some extrinsic pressure on the bowel in the left abdomen, which probably means that a mass is present. Chest films show no pleural reaction (fig. 6).

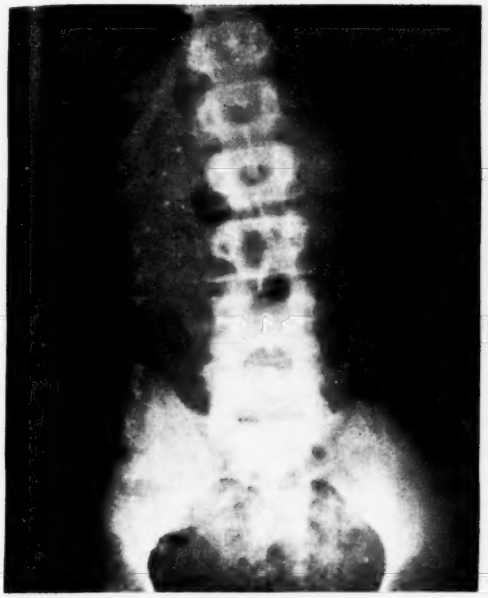


Figure 5. Upright film of the abdomen, showing haziness in the right upper quadrant. The arrow indicates compression of the gas pattern by extrinsic pressure. Figure 6. Normal chest film above.

DR. BAKER: This chest film was taken at the time the patient was tender and had fever. The purpose of the film was to attempt to demonstrate elevation or fixation or pleural reaction, which was not present. Fluoroscopic examination showed that the diaphragms moved well.

DR. MESZAROS: You can have subphrenic abscess and have the diaphragms at a normal level, and there can be motion of the diaphragms, too. In this film (fig. 5) there is a huge mass in the right abdomen. This was taken the day he was drained.

DR. BAKER: What percentage of subphrenic abscesses have air-fluid levels?

DR. MESZAROS: I couldn't give you a specific percentage. It would depend on many things — duration, for instance, and nature of the infecting organism.

DR. BAKER: I think more abscesses occur without it than with it, which is contrary to the usual thought.

DR. JENSIK: I think there are more without an air-fluid level, too. The presence of an air-fluid level makes the diagnosis relatively easy, but normally this is not the case.

DR. BAKER: This patient developed guarding and tenderness, and with this there was the radiodensity in the right upper quadrant. We felt there was suppuration in the right upper quadrant, but we questioned whether it was subphrenic or subhepatic, or within the liver substance. What would be your approach?

DR. LICHTENSTEIN: I notice that four drains were put in Morrison's pouch. Where was their exit?

DR. BAKER: From a stab wound in the right flank.

DR. LICHTENSTEIN: The radiologist pointed out this large mass. There must have been bulging on the right side, and on suspicion alone I would make the incision there. A hole had been made to do a certain thing and it was not successful. If you put a drain in Morrison's pouch, remember that the pouch is an excavation. It can hold a tremendous quantity of fluid, and it can overflow onto the superior surface of the liver and form a subphrenic accumulation. The purpose of putting in a drain is to establish an exit for something that might accumulate.

When you see a patient with injury to the liver there may be no bleeding, because some of the blood clots that have formed have already

closed the hole, but with recovery of the patient there will be bleeding. When you have a through and through hole in the liver, bile will leak out; and that presents a somewhat different problem. When an injury to the liver is sustained, necrosis will result which is not visible at the time of operation but which will occur within the next 4 to 10 days or even two weeks, and all of this material will then leak out of the damaged liver. You put drains in so there will be an open door to allow the material to come out whenever it is ready to do so. When you put drains in, leave them in. Don't take them out until they fall out or until you discharge the patient and can remove all of the sutures. Leave them in until you are sure there is nothing more to drain; one or two days' drainage is seldom sufficient because it takes some time for the material to come up.

The drain you put in went down through a stab wound into the bottom of Morrison's pouch. Drainage is usually dependent, but the Penrose drain allows for only overflow drainage. You have to have enough fluid to come up to the surface of the body and then it overflows, but it takes some time for that to occur. Stab wound sites for the drains are best, as postoperative herniation rarely occurs in stab wounds. If the drains had been left in here, possibly this complication of subphrenic abscess would not have occurred. In the last analysis, the drains here did not serve their purpose, and drainage had to be performed. You had to open the right upper quadrant, put in a Chaffin tube, suck out the fluid, and that allowed the patient to recover.

With regard to the right subcostal incision, remember that besides providing for drainage of Morrison's pouch, you want to make the incision low enough to slip a catheter behind the liver in the posterior subphrenic space and above the liver into the anterior subphrenic space; then you can empty out the liquid contents of those spaces very rapidly and allow the walls of the cavity to coalesce. They will plaster over if you can keep the spaces empty. That is part of the difficulty inherent in use of the Penrose drain, as it is only a means of keeping the wound open for overflow. If the accumulation of fluid is large, never depend on the Penrose to decompress the space. You must enlarge the incision and put in a stiff rubber tube or a tube through which suction can be applied to empty out the contents. In some patients, infection is not the problem as it was in these cases, but rather extravasation of fluid, such as bile, duodenal contents, etc.

A case in point is that of a patient who had a cholecystectomy, and no drains were used. It was an "easy case." The gallbladder came out, everything was dry, the wound closed without drainage, and on the third postoperative day the patient had difficulty breathing, respirations were rapid, and the temperature was elevated. When an *x*-ray was taken, the diagnosis of pleurisy was made because of a pleural effusion, and she was treated for the respiratory condition. They inserted a needle to aspirate the fluid and obtained about 1000 cc. of golden yellow bile. The "effusion" was the diaphragm pushed high into the right hemithorax. There was no air-fluid level, and sterile fluid was obtained. It was not an abscess, nor was it a hematoma, but just pure bile that accumulated below the markedly elevated diaphragm.

It is important to scrutinize the *x*-ray film carefully because the rounded area must be identified as diaphragm. If a needle is put into the pleural cavity to aspirate the fluid, an empyema will result from contamination of the pleural space. Fortunately, in the case I cited, there was sterile bile and no infection took place. Even though the case looks easy, it is possible that damage can occur, and I think all cholecystectomies should be drained.

I should like to reiterate: When a drain is put in, just leave it in. Don't take it out too soon. There is no point in taking the drains out before you take the sutures out, and in subphrenic accumulations I would leave the drain in as long as material is there and draining.

DR. BAKER: This patient had a large accumulation of purulent material in the right subhepatic space, and this was drained through a right subcostal incision. A tube was inserted and suction was started. I think the point is well taken that a Penrose drain is not the same nor as effective as stiff catheter drainage.

DR. FREEARK: Dr. Jensik, have you seen biliary fistula into the chest?

DR. JENSIK: No, I have not seen any, but several cases have been reported.

DR. BAKER: We were confused here because there was such a large abscess, and yet the diaphragm moved so well. But it was the subhepatic and not subphrenic location which allowed

this to occur. Ordinarily a collection between the liver and diaphragm will paralyze diaphragmatic activity; when the liver is interposed between the pus and the diaphragm, this is much less likely to occur.

Summary and conclusions

1. The most common causes of subdiaphragmatic abscess in any of the six spaces are perforated peptic ulcer and then appendicitis. Together they represent about 50 per cent of all cases of subphrenic accumulations of pus.

2. Abdominal operations, such as cholecystectomy, splenectomy, and subtotal gastric resection, may be the prelude to a life endangering intra-abdominal abscess.

3. About one half of subphrenic abscesses are pure culture infections involving *E. coli* or a streptococcus; less commonly, staphylococcus. Mixed infections comprise the other half of the group, and *E. coli* is almost always involved.

4. The recumbent position, during bedrest or following abdominal surgery, allows the region of the junction of diaphragm and posterior abdominal wall to be dependent; fluid and/or pus gravitates to this position, and is spread over the diaphragm and adjacent viscera by constant movement. Fowler's position, in which the patient is kept semi-sitting, is designed to prevent this gravitation of fluid and pus, permitting it to run into the pelvis for easier evacuation.

5. Diagnosis of subphrenic abscess is usually based on several of the following signs:

a. Persistent sepsis, with or without fever
b. Chills, tachycardia
c. Upper abdominal pain, shoulder pain
d. Persistent, localized tenderness in an upper quadrant or over the costal margin.
e. Vomiting, distention
f. Anemia, leucocytosis (usually polymorphonuclear)

6. X-ray examination is helpful in assessing the subdiaphragmatic spaces. The most useful films are upright PA and lateral films of chest and upper abdomen; fluoroscopy as well should be used. The salient findings on x-ray and fluoroscopy in the presence of subdiaphragmatic abscess are

a. Elevation of the affected hemidiaphragm
b. Diminution or abolition of movements of the diaphragm on the affected side
c. Increased thickness of the diaphragm, and loss of sharp definition of the upper border
d. Pleural effusion, basal pneumonitis, or basal atelectasis
e. Presence of gas in a subphrenic abscess
f. Large subphrenic radiodensity

Use of diagnostic pneumoperitoneum to delineate subtle abscesses has been of great value in some cases.

7. Serous pleural effusion is a common occurrence in subphrenic infection. Its recognition in a patient who has had an abdominal operation or catastrophe should always lead to the search for a subphrenic accumulation of pus. This fluid may be clear or somewhat cloudy, rarely contains microorganisms, contains protein, and frequently red and/or white blood cells.

8. The three most important causes of intrathoracic suppuration in association with subdiaphragmatic abscess are

a. Rupture of the abscess through the diaphragm
b. Inadvertent transthoracic drainage of the abscess
c. Penetrating thoracoabdominal wounds resulting in suppuration

9. Bronchial fistula is sometimes a complication of the abscess, usually the consequence of the lung becoming adherent to the diaphragmatic pleura prior to the abscess rupturing through the diaphragm.

A Universal Gonadal Shield

ENRIQUE SCHWARZ, M.D., JOHN I. PRETTO, M.D., AND SAMUEL MARTIN, R.T., *Chicago.*

IN RECENT literature, in both medical and lay publications, much has been written about the ultimate genetic effect on man of cumulative exposure to roentgen rays. At the same time, however, the number of diagnostic radiographs of the gonadal area is increasing without adequate patient protection. The unacknowledged need and the lack of suitable shielding devices for such radiographs is obvious.

Ardran and Kemp in 1957 employed a T-shaped lead shield for protection of the male gonads during diagnostic procedures.[1] Another testicular shield was devised by Dr. Paul Hodges in 1958, built at the University of Chicago, and used to good advantage.[2] Reported that same year, too, by Abram et al. was a simple lead shield for the protection of the female gonads.[3] Our modification of this shield has been tested and used successfully for both men and women of all ages. For us, it is the most practical mechanical solution to the problem of protection; enforcement of use is another problem.

This shield may be easily adjusted to various sized patients by simply fanning the leaves. It is shown in Fig. 1. Its use and flexibility are illustrated in Fig. 2-3.

**From the Department of Radiology, College of Medicine, University of Illinois, Chicago.*

Summary

A simple, easily constructed, inexpensive, expandable gonadal shield which can be applied to any patient of either sex in any age group is described. It is easily portable, placed, and adjusted by a technician, and affords adequate gonadal protection for most table-type diagnostic radiologic procedures.

REFERENCES

1. Ardran, G. M., and Kemp, F. H.: Protection of the Male Gonads in Diagnostic Procedures, Brit. Radiol. **30**:280, 1957.
2. Hodges, P. C., Strandjord, N. M., and McCrea, A.: A Testicular Shield, J.A.M.A. **167**:1239, 1958.
3. Abram, E., Wilkinson, D. M., and Hodson, C. J.: Gonadal Protection from X-Radiation for the Female, Brit. Radiol. **31**:335, 1958.

Figure 1

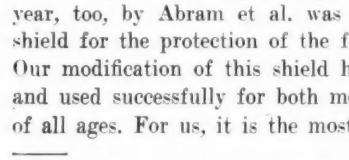


Figure 2

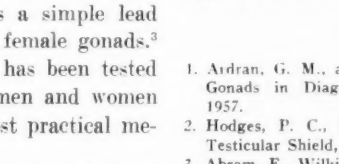
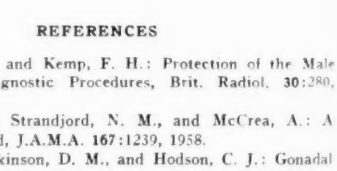


Figure 3



A Look at Our Future*

H. Close Hesseltine, M.D., *Chicago*

Now that the last session of House of Delegates is drawing to a close, there are matters for your future consideration that are worth stressing.

You, the members of the House of Delegates, shoulder a serious responsibility as representatives of over 10,000 members of our organization. Since you are representatives of the respective counties, you could, and should be, excellent avenues of communication also.

In the months ahead, as in the years gone by, we will have problems. We know that legislative medicine is bad medicine. We know that our efforts in the health and welfare of our people have surpassed by far those of all other groups. The history of our success in advancing and elevating standards of medical care stands out in bold relief. Since 1920 we have witnessed more advancements in medical and surgical care than occurred in all the preceding centuries. Remarkable progress has been made in the realm of infectious and metabolic diseases. Surgical skills now include procedures undreamed two score years ago. Scientific, medical, and surgical services, judged by the current times, envision an even brighter future with further extension of life, with more comforts and better health. If this progress is to be beneficial and balanced, it will require that we keep the public informed, first, for their own proper use of our services, and secondly, so that we and our abilities are not misunderstood.

The public now realizes that medical sciences not only can cure but that they can do much to prevent disease, illness, and anguish—both mental and physical. Our public relations in the past have been good but must be improved.

Today, nearly 20 per cent of a working person's adult life will be spent in retirement when enforced at the age of 65. In another few years, according to predictions, about one-fourth of his adult life will be spent in retirement unless current practices are changed.

Organized medicine is primarily responsible for this extension and for increasing the benefits of life. We have lived and practiced by the laws of God, the will of society, and the instinct of man. We have paid respect to the dignity of the individual and have supported private enterprise, and, we have championed freedoms.

Unfortunately, medical costs can be expected to increase because of the increasing costs involved in scientific progress, and the increasing demands for greater use of results of that progress. This year the public will spend more for medications, appliances, glasses, and like aids than they will pay to physicians.

We should encourage all people to anticipate their medical, social, and economic future. If one would work regularly from the age of 25 to 65 (40 years) and during this employment—either by his own efforts or jointly with his employer by some combination of percentages—would put aside 10 per cent of his yearly income, it is estimated that at a 3 per cent interest rate he would realize a life-time annuity at age 65 equal to about 50 per cent of his last year's salary. Professional people, like physicians, almost invariably start making a livelihood much later than at 25 years of age, but they tend to work beyond age 65. If the government would permit the self-employed to put aside retirement funds before taxation, we could have some of the same economic security.

The matter of "Relative Value" is still before us and will keep reappearing until some resolution of the problem is achieved. We should investigate all of the aspects of the matter thoroughly. Such systems permit adjustments readily. As a matter of fact, all fees have a relative value whether they are established on a formal or informal basis. The Relative Value system is a formal system. It is concrete. It allows better actual

*Acceptance Address of the president before the House of Delegates, 120th annual meeting, Illinois State Medical Society, May 26, 1960.

projection. It permits modification with greater ease. It can be adjusted to an individual's practice, and special factors may be added to this structure.

It is ironic that we, the medical profession, must be organized to protect the health interests of the public. Our influence would be enhanced by encouraging every qualified, eligible physician to membership and an active role in organized medicine. There are a number of physicians (not now on our membership list) on medical school faculties, in industry, governmental agencies and like positions who could increase our membership roll to the advantage of all of us.

Whitehead warned us upon the need ". . . . for continual contemplation of greatness, lest we bog down in the quicksands of trivia." Santayana enjoined us to comprehend our place in society and the profession by knowing history, "for those unaware of history are doomed to repeat it."

We must be alert that we may recognize the problems early, diagnose the situations with accuracy, and institute approaches and managements for the best possible end-results. The future, according to all indications, will present to us more medico-social and medico-economic problems than we have encountered in the past. If we fail to rise to the occasions as these matters appear, the public and the medical profession will both suffer—perhaps irreparably. We must not fail the public. We dare not fail.

Time for rebuttal

In the past many have criticized these theories and the claims of zealous Freudians for the lack of scientific evidence. I cannot recall a single rebuttal to such criticism in which the issues raised were squarely met. Instead of answers or the presentation of evidence, one is likely to receive a violent, and perhaps sarcastic, personal rebuke. The reaction of a prominent psychiatrist to Emil Ludwig's study of Freud and his theories is illustrative. In his review of this book the psychiatrist avoids all of the arguments made by Lugwig and neglects all the evidence presented. Instead of attempting a rebuttal, the reviewer confidently asserts that Ludwig's failure to accept Freudian theory is an expression of his envy and that this envy is a result of the fact that Freud was a greater biographer than Ludwig.

Tactics such as these are sometimes accompanied by an abstractly philosophical argument in which points are "proved" by analogy. Analogies, we all realize, are useful in the effort to express oneself; but they do not constitute evidence—not even a little evidence! Specious evidence is also sometimes produced by extracting from a case study the very assumptons that were plainly projected into it by the observer. Why cannot proof of these cherished beliefs be offered? Fifty or more years have passed since the basic theories were advanced. Surely this has afforded time for some piece of irrefultable evidence to be produced; for something sufficient to hush mouths such as mine. If such evidence does exist, I see no reason why it should not be pointed out to me. *Corbett H. Thigpen, M.D. Multiple Personality. The New Physician. May 1960.*

Psychological factors in migraine

The third way in which psychological factors seemed to act was that, in established magrainous subjects, they precipitated a series of attacks. This was more obvious among the men. One developed an exacerbation when told his child was a mongol; another when he was rejected for the services; a third during a period of excessive work for his trade union; another in relation to accountancy examination; another during his wife's pregnancy; and a childless woman when she lost her pet dog. One patient described it graphically: "My mother died, my daughter went to Canada, my huband lost his teeth, and my boy changed to ladies' hairdressing, all in month." *Richard A. Hunter, M.D., and Ian P. Ross, M.D. Psychotherapy in Migraine. Brit. Med. J. April 9, 1960.*

Skin Manifestations in Sepsis in Newborn

JULIUS J. WINEBERG, M.D., *Waukegan

SEPTICEMIA of the newborn carries a high motality. Diagnosis is not easily made, as the newborn frequently do not react to infection with fever and toxic symptoms. Successful treatment depends on early recognition.

Skin lesions as an early sign of sepsis have been described by several clinicians. Dunham[1] reviewed 39 cases, 18 of which had skin lesions. Twelve were characterized by erysipelas or a localized abscess caused by Group A hemolytic streptococci. Fives cases of staphylococcal origin had impetigo, pemphigus, multiple abscesses, and dermatitis exfoliativa. Silverman[2] described four cases of septicemia with a skin eruption. He added sclerema and a diffuse macular eruption as an additional skin manifestation. Smith[3] and Nyhan[4] describe erysipelas, impetigo, subcutaneous abscess, and sclerma as the skin manifestations of septicemia.

The purpose of this paper is to report a transient, undescribed rash which was the initial sign of sepsis in three premature infants. During a six month period three premature infants, who were progressing well otherwise, developed a transient rash consisting of faint pink macules 5 to 10 mm. in size, discrete, and scattered over the lower abdomen. In one case the rash disappeared prior to antibiotic therapy; and in the other two cases antibiotics were prescribed at once, and the rash disappeared within 24 to 36 hours.

Blood cultures were taken at the inception of the rash, the skin having been cleaned with pHisoHex® and then treated with iodine followed by alcohol. The blood was collected in vacuum bottles, separate needles being used for penetrating the skin and the vacuum bottle.

Cultures from two different infants grew hemolytic *Staphylococcus aureus* coagulase positive within 36 hours, and Group A hemolytic streptococci were isolated from the blood of the third infant.

Case reports

Case 1. J.M., born in an automobile, was said to be of 6½ month gestation. Birth weight was 3 pounds 7 ounces. The infant was placed in an Isolette® with full humidity and was given Achromycin® for three days. Feedings were started at 48 hours of age, and the baby took 10 to 15 cc. every two hours, sucked well, and was active. The weight decreased to 3 pounds ½ ounce. At 4 days of age the infant developed some pink macules on the lower abdomen and intertrigous erythema in the groin. Cultures were taken of nose, throat, skin, and blood, even through the infant was clinically normal and no antibiotics were used.

On the fifth day the rash began to disappear, and on the sixth day was gone, but the infant suddenly turned cyanotic, refused feedings, and his condition deteriorated in spite of Chloromycetin®, erythromycin, and gamma globulin. Nose, throat, and skin cultures revealed *Staphylococcus aureus* coagulase positive. The organism was penicillin and tetracycline resistant but sensitive to Chloromycetin and erythromycin.

Comment. The baby was clinically well at the time of the inception of the rash. This was not the typical rash of sepsis, and antibiotics had been withheld.

Case 2. M.S. was born Nov. 9, 1958, one of twins of a 40 week gestation, weight 3 pounds ½ ounce. His fraternal sibling died after 48 hours from hyaline membrane disease. He was placed in an Isolette. Feedings started at 72 hours, and he took 5 to 10 cc. every two hours. The infant was active, sucking well, and maintained normal

*Victory Memorial Hospital

Dr. A. Thain referred case I and Dr. R. Robbins, case II.

color without oxygen. He received 150,000 units of penicillin for five days and ½ cc. of gamma globulin.

At 15 days of age five or six salmon-pink macular papules ½ cm. in size, discrete, round, fading on pressure, and without pus appeared on the lower abdomen. Cultures were immediately drawn, the baby placed in an isolation nursery, and Kantrex® and Chloromycetin started at once. Within 48 hours the rash disappeared, and the infant continued to appear healthy. Suddenly he began to suck poorly, developed cyanotic spells, and showed general deterioration. Cultures of the blood and throat revealed Group A hemolytic streptococci. The infant was fed by gavage, and 300,000 units of penicillin was administered daily. He had a very stormy course for one week and then made an uneventful recovery. He was discharged January 6 weighing 5 pounds.

Comment. This illustrates the presence of sepsis in an otherwise normal infant whose treatment was instituted 48 hours prior to clinical symptoms, because of the significance given a very mild rash. A delay of 48 hours in a premature infant could be fatal.

Case 3. L.D. was born Nov. 7, 1958, after a 7 month pregnancy. The infant had good color and respiration at birth, but looked very premature. She was placed in an Isolette and given ½ cc. of gamma globulin. Two days later a fine papular rash appeared on the lower abdomen. Blood, nose, and throat cultures were taken, and penicillin (150,000 units) and Chloromycetin (100 mg./Kg.) were started intramuscularly. The baby's color remained good, the cry was lusty, and she was active. The following day the rash was gone and the baby continued to do well. Glucose feedings were started.

Hemolytic *Staphylococcus aureus* coagulase positive were noted on blood culture. Throat culture revealed pneumococci, gamma streptococci, and *Staphylococcus albus.* Nose culture revealed *S. albus* and gamma streptococci. A culture from the skin grew *S. albus* and *S. aureus* (hemolytic).

On November 11 the baby became listless and began to have cyanotic spells. A venostomy was done, and fluids and erythromycin were given by vein and Kantrex, intramuscularly. The baby began to improve slightly; but on November 13 the condition deteriorated rapidly and the baby died.

Summary and conclusions

Skin manifestations consisting of petichiae, impetigo, erysipelas, sclerema, abscesses, and bullae associated with sepsis of the newborn have previously been described.

This paper describes the occurrence of a transient maculopapular rash in premature infants as an early sign of sepsis. The importance of this rash is clearly seen in case 3 when antibiotics were instituted 48 hours prior to any clinical signs of sepsis. The transient nature of the rash makes it imperative that nurses in charge of prematures report promptly to the physician in charge the presence of any rash no matter how innocuous its appearance. The organisms associated with the rashes were coagulase positive staphylococci in two cases and Group A streptococci in one case. The rash described was not characteristic of the infecting organism.

REFERENCES

1. Dunham, E. C.: Septicemia in the Newborn, Am. J. Dis. Child **45**:229, 1933.
2. Silverman, Wm. A. and Homan, Wm. E.: Sepsis of Obscure Origin in the Newborn, Pediatrics **3**:157, 1949.
3. Smith, R. T.; Platou, E. S., and Good, R. A.: Septicemia of the Newborn; Current Status of the Problem, Pediatrics **17**:549, 1956.
4. Nyhan, W. L. and Fousek, M. D.: Septicemia of the Newborn, Pediatrics **22**:268, 1958.

Reference Page Number 9

Cytology

The usefulness of cytology in early detection and treatment of carcinoma has been well established. To make study worthwhile and productive, the pathologist needs slides of material on which cells retain their shape and content. The College of American Pathologists and the National Cancer Institute has published the methods of slide preparation included in this Reference Sheet

Several methods can be used to collect material for cytologic examination. If any doubt exists as to how the specimen should be obtained, the pathologist to whom the specimen will be sent should be consulted. If the patient is pregnant or has received endocrine treatment or irradiation therapy, this information also should be sent to the pathologist.

Vaginal aspiration has value in detecting cancer, and is also the material of choice for an evaluation of endocrine status; cervical aspiration provides a comprehensive sampling of the most critical area in the uterine cervix. Samples of these cervical scrapings are prepared for the pathologist as follows.

Preparation of cell films.

The collected material is transferred **immediately** to a glass slide, allowing sufficient space at one end for labeling. The collected material is distributed in a thin film over the slide by means of the aspirating instrument or by transferring the material to one slide and then using the end-edge of a second clean slide to spread the material, as is sometimes done in making a blood film. Because various techniques can be used to prepare the cell films, the cytologist or pathologist to whom the specimen will be sent should be consulted as to his preference.

Fixation of cell films.

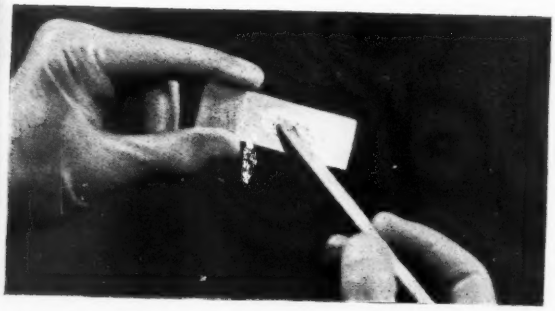
The cell films are immersed **immediately** in the fixing solution. The solution may be composed of equal parts of 95 per cent alcohol and ether, or 90 per cent isopropyl alcohol or even acetone may be used. Slides can be separated in the fixing solution by fastening a paper clip at each end. This allows the fixative to come in contact with the entire cell film and prevents the cell films from rubbing against each other. Care should be taken to insure that the level of the fixative is adequate to cover the cell films to prevent drying of the specimen.

Preparation for mailing.

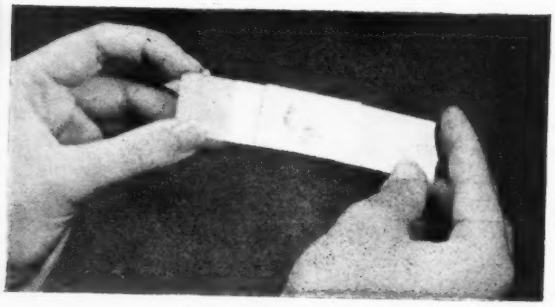
The slides are fixed at least for 30 minutes. When removed, they are covered with glycerine before drying occurs. A clean glass slide can then be applied to the slide with the cellular preparation, to act as a temporary coverslip to facilitate handling. The slides are mailed preferably in cardboard mailing tubes rather than in flat containers in order to lessen the chance of breakage. A completed requisition form should accompany the slides. Without certain pertinent information, it is difficult to evaluate some cellular changes correctly.

Sputum and bronchial material; fluids from pericardial, pleural, peritoneal, or joint spaces; nipple fluid; gastric secretions; urine; and specimens from the prostate, colon, and duodenum necessitate various procedures for evaluation of the material.

Preparation of Slides



1. The material is placed on a new, clean slide . . .



2. The specimen is distributed in a thin film . . .

3. Material must not be dried before fixation . . .

4. Slides are covered with glycerine after fixing . . .

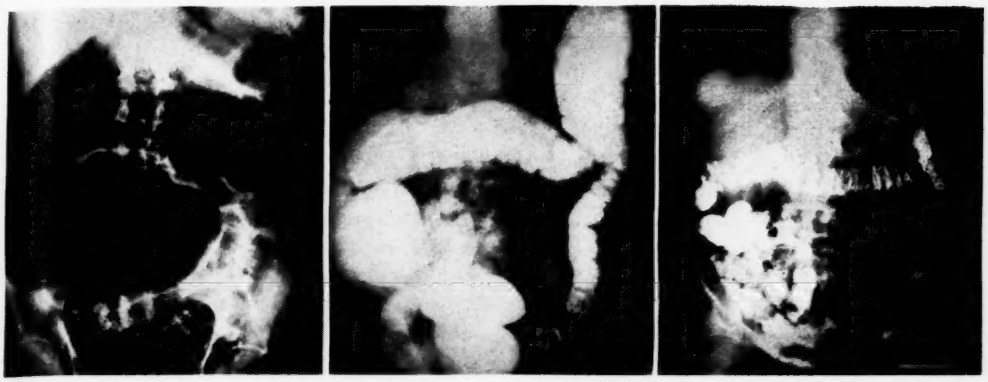
5. A clean glass slide is used as a coverslip . . .

6. Cardboard tubes are preferable for mailing . . .

Illustrations and directive paragraphs are from the brochure "The Importance of Cytology to the Practicing Physician", published and distributed by the College of American Pathologists.

from the

Illinois Medical Journal
JULY, 1960



A B C

Figure 1. Case 1. Admission radiograph of abdomen (A) demonstrates marked colon dilatation. Exploratory laparotomy revealed no obstruction or volvulus. B. Barium enema examination 10 months later. Colon is essentially normal. C. Post-evacuation film shows colon not dilated nor obstructed.

Adult Megacolon without Obstruction

MYRON MELAMED, M.D., ANTON M. PANTONE, M.D., AND JACK WILLIAMS, M.D.,* *Chicago*

MEGACOLON, without small bowel dilatation, in an adult is frequently related to mechanical obstruction. In some instances, however, massive dilatation of the colon can be related to other causes. For this reason, the presence of a dilated colon suggesting obstruction on a radiograph should not be interpreted as an obstruction without confirmatory barium enema examination.

Two cases are herein presented in which massive colon dilatation was definitely not related to blockage of the distal colon. The etiology of large bowel dilatation in these older patients was apparently due to a form of paralytic ileus or neurologic disturbance. Clinical and laboratory studies failed to determine a cause.

The first patient (Case 1), a 75 year old white male, was admitted to the hospital with abdominal pain, constipation, and abdominal distention of three days' duration. He was a known cardiac patient under digitalis control. A radiograph of the abdomen (Fig. 1A) revealed colon distention of marked degree. Diagnostic possibilities included mechanical obstruction of the left colon, cecal volvulus, or unusual paralytic ileus. Barium enema examination revealed no obstruction of the sigmoid colon or cecum. The radiographic diagnosis: unusual form of paralytic ileus. An exploratory laparotomy revealed marked dilatation of the colon with no evidence of intrinsic lesion of the large bowel, cecal volvulus, nor vascular obstruction. A cecostomy was performed and closed one month later. Barium enema examination 10 months later (Figs. 1B and 1C) showed a normal colon.

Diagnosis: Unusual form of ileus with massive colon distention. No mechanical obstruction.

Case 2 concerned a 68 year old white female admitted to the hospital with a clinical diagnosis of cerebral vascular accident with sudden onset of convulsions and a varying state of consciousness. The neurologic consultant's diagnosis was, "convulsive disordor secondary to cerebral vascular insufficiency." The patient's history was noncontributory. She had had a cholecystectomy and choledochoplasty in 1956. Shortly after admission, marked abdominal distention was noted. A radiograph disclosed marked colon distention (Fig. 2A), but barium enema examination revealed no obstruction or evidence of intrinsic

*From the departments of radiology and internal medicine, College of Medicine, University of Illinois, and Grant Hospital, Chicago.

colon disease. The patient improved with conservative management and was discharged from the hospital two weeks after admission. A radiograph of the abdomen shortly after discharge (Fig. 2B) revealed no abnormality. The bowel shadows were well within the range of normal. There was no bowel dilatation. Laboratory examinations were not contributory.

Diagnosis: Unusual form of ileus with marked colon distention. No mechanical obstruction.

The main concern in adult megacolon revolves about mechanical obstruction. However, cases of megacolon in the aged without known cause, or due to hernia with incomplete obstruction[1,2] have been described. In addition, megacolon has been described in parkinsonism and chronic avitaminosis.[4,7] Similarly one may occasionally observe colon dilatation related to pancreatitis[5] and mesenteric thrombosis. Marked dilatation of the colon has also been described in cases of ulcerative colitis[3,6] and we have observed a few such patients. The cases of colitis are easily differentiated by clinical history, proctoscopic findings, and radiographs of the abdomen with or without barium in the colon.

We believe that our patients' findings can be related to unusual forms of paralytic ileus. The possibility of "functional" disturbance producing abdominal distention with extreme degrees of megacolon should always be kept in mind.

Summary

Two cases are herein presented in which extreme degrees of colon dilatation were not related to mechanical bowel obstruction. The described findings can be the result of an unusual form of paralytic ileus or, as in one case, to a "neurologic disturbance."

REFERENCES

1. Creech, B.: Megacolon; Report of a Case in the Aged and Review of the Literature, North Carolina M. J. 11:241-246, 1950.
2. Drye, J., and Pirkey, E. L.: Acquired Megacolon, Southern Surg. 16:196-203, 1950.
3. Lumb, G., Protheroe, R. H., and Ramsay, G.: Ulcerative Colitis with Dilatation of the Colon, Brit. J. Surg. 43:182-188, 1955.
4. Lewitan, A.; Nathanson, L., and Slade, W.: Megacolon and Dilatation of the Small Bowel in Parkinsonism, Gastroenterology 17:367-374, 1951.
5. Machela, T.: Medical Aspects of Pancreatitis, J. A. M. A. 169:1571-1577, 1959.
6. Madison, M. S., and Bargen, J. A.: Fulminating Chronic Ulcerative Colitis with Unusual Segmental Dilatation of the Colon. Report of Case, Proc. Staff Meet. Mayo Clin. 26:21-24, 1951.
7. Raia, A.: Pathogenesis and Treatment of Acquired Megacolon, Surg. Gynec. & Obst. 101:69-79, 1955.

A

B

Figure 2. Case 2. Radiograph (A) disclosed marked dilatation of the colon. Differential possibilities include mechanical obstruction of left colon or unusual paralytic ileus. Barium enema revealed no obstruction. B. Radiograph 2 weeks later shows no bowel dilatation following conservative management.

Low Sodium Diet In Congestive Heart Failure*

EDITH B. FARNSWORTH, M.D., *Chicago*

LIKE OTHER branches of culture, medical thought forms traditions of considerable durability. In the context of therapeutics, concepts may exist in the absence of a well-established scientific basis, or they may precede by many years a systematic clarification of the mechanism. The administration of a "low-sodium diet" to patients in congestive heart failure is a tradition in medical practice which has added a few years to the lives of these patients; but the mechanism of this important benefit has remained incompletely elucidated, notwithstanding extensive research on the subject. Viewed as a sauce-pan, a container with a single compartment bounded by impermeable walls, the patient has been far better off when the physician limited the therapeutic seasoning; but, viewed as an aggregate of several inter-related fluid compartments bounded by permeable living membranes, such an approach may be a gross oversimplification which, commonly practiced, may tend in turn to an undesirable loss of insight on the part of the physician.

An individual ordinarily ingests 10 to 15 Gr. of sodium chloride daily. By eliminating sodium in food preparation and in prescriptions and by avoiding foods rich in sodium, the daily intake of sodium may be reduced to 500 mg. or even less on a diet otherwise nutritionally adequate.

Whether the intake includes 1 or 15 Gm. of salt, absorption from the gastrointestinal tract is practically complete, a fact deduced from the virtual absence of salt in the feces. Incorporated in the blood plasma in appropriate concentration, salt is available for distribution in the extracellular fluids, to a far lesser extent in the intracellular fluids, and in the tissue pools. Under normal conditions, about 1.4 per cent of the renally filtered salt will be continually eliminated from the body by the kidneys. Loss of salt takes place also by the lesser routes of sweat and tears.

The total body content of sodium has been estimated at about 80 mEq/Kg.[1] Since estimates are based upon dilution experiments employing tracer substances, allowance must be made for the fact that results thus obtained are based upon "exchangeable" ions, and that sodium which is somehow fixed is not taken into account, or is merely conjectured.

Redefinition of terms

Values for sodium concentration in the fluid compartments, as well as the definition of the compartments themselves, have varied according to the methods adapted for analysis. Thus, earlier work, which depended upon chemical determinations carried out upon fluids and tissues, defined the spaces as (1) blood plasma, (2) extracellular space, and (3) intracellular space, with approximate sodium concentrations of 140, 140, and 10 mEq./L., respectively.[2] Dilution studies employing various tracer elements have posed the problem from another angle, redefined the fluid compartments, and advanced another series of values, in which "space" denotes the volume in which the tracer substance is diluted.

Also the factors which guarantee the volume and composition of the fluid compartments and govern the migration of sodium from one compartment to another have undergone revision since Starling's law concerning the passage of fluids across the capillary barrier was first postulated. Developing insight into the role of hormones in the active transport of substances over membrane barriers has thrown certain doubts

**While the Nutrition Committee of the Chicago Heart Association is sponsoring this article, the opinions expressed are those of the author and do not necessarily represent the official view of the committee.*

upon the relative simplicity of equilibrated hydrostic and osmotic pressure operating over inert membranes.[3]

Despite these areas of imperfect scientific information, the decreased excretion of sodium and its resultant decreased ratio to chloride has been demonstrated clearly in congestive heart disease. Conversely, therapeutic effectiveness of both mineral salts containing the chloride anion and diuretics which (by whatever mechanism) are capable of reducing the tublar reabsorption of sodium is clinically obvious.

Distribution of body fluids

Let us now review the distortions of body fluid compartments and of their contained electrolyte solutions, in the syndrome of congestive failure, in order to observe in greater detail the effect of variations in the intake of sodium. In proposing such a simplified working hypothesis, it must be acknowledged that the opinion of investigators on all points is by no means unanimous.

The diagnosis of congestive heart failure is ordinarily made at the bedside, upon the detection of some or all of the classical signs and symptoms, namely, manifest edema of dependent parts, hydrothorax, rales in the lung bases, dyspnea, cyanosis, tenderness and engorgement of the liver. An increase in the volume of extracellular fluid may be inferred. Although quoted values vary somewhat, it is probable that plasma volume is also somewhat augmented. The condition of the intracellular compartment, its composition and volume, are difficult to assess reliably, although there is evidence that sodium and water are increased within, as well as outside, the cells. Determinations of serum sodium, potassium, chloride, and carbon-dioxide combining power are likely to fall within normal limits. The ratio of sodium to chloride in the urine will be found to be decreased, unless modified by the administration of exogenous mineral salts. Plasma protein concentrations are rarely diminished significantly. Venous blood pressure is characteristically elevated; and circulation times, particularly in the greater circuit, are substantially prolonged.

The fate of 5 Gm. of ingested sodium chloride may be readily predicted, despite the uncertainty which still exists concerning the mechanisms by which the changes just noted have been effected. Absorption of sodium will elicit thirst which will be satisfied by intake of water. Plasma volume will increase somewhat, concomitantly with an increase in sodium concentration. This temporary increase would normally equilibrate rapidly with the extracellular fluid across the membranes of the peripheral capillaries, and normal function of the renal tubules would operate to reject the excess of sodium and water, thus tending to preserve the total body sodium and water within normal range.

Imposed upon the pathologic modifications of fluid volumes and electrolyte concentrations already existing in congestive failure, the extra sodium charge will further increase the serum sodium concentration and the plasma volume. The capillary membranes will detect such increases and transmit them, at least partially, to the extracellular fluids. The result will be reflected in increased edema; and the augmentation of fluid in the lung bases will be noted as intensification of cyanosis and dyspnea. The increased sodium load presented by the glomeruli to the renal tubules will meet the increased reabsorption which is the characteristic dysfunction of the syndrome; and the relative oliguria, with decreased sodium-chloride ratio, will increase total body weight, on the basis of an absolute increase in body salt and water.

Effects of limiting sodium

Conversely, the limitation of sodium in the diet will promote the absorption of fluids poor in sodium and the dilution of the serum sodium concentration. Decreased concentrations at the capillary barriers will be equilibrated by the passage of sodium from the extracellular fluid back into the circulating plasma. Offered to the renal tubules, the diminished sodium load will promote a water diuresis and facilitate the excretion of sodium. Thus, the total body sodium will tend to diminish, and the signs and symptoms of congestive heart failure will be ameliorated.

If to the limitation of dietary sodium is added the administration of a diuretic which will artificially produce a sodium diuresis, cardiac compensation can usually be reestablished, at least for a period, and the fluid compartments can be restored to normal volume and composition. Diuretic agents may act to prevent the absorption of sodium from the gastrointestinal tract, as in the case of the resins; they may modify the elaboration of urine in such a way as to induce

the excretion of sodium, as in the case of mineral diuretics; or they may predispose the renal tubules against the reabsorption of sodium, as with the carbonic anhydrase inhibitors.

In conclusion, mention should be made of the possible dangers of long-continued sodium restriction, although these are surprisingly infrequent, unless vomiting or diarrhea has intervened to produce an uncontrolled loss of fluid and electrolytes. In its most critical form, the result is an acute reduction in plasma volume, with circulatory collapse. Short of this, disturbances of acid-base balance may occur and should be prevented by frequent determinations of serum electrolytes, particularly when the decompensation is of long duration and the depletion of the tissue sodium pool may be marked.

In the correction of such disturbances, caution is likewise recommended. An alert house-officer may perform a few rapid calculations based upon the plasma volume as 5 per cent of the body weight, and extrapolate to the extracellular fluid as 20 per cent; but it is well to remember that such calculations are empirical and that the factors governing the migration of substances from one compartment to another are largely unknown. The patient is not a saucepan.

REFERENCES

1. Elkinton, J. R., and Danowski, T. S.: The Body Fluids, Baltimore, The Williams and Wilkins Co., 1955.
2. Gamble, J. L.: Chemical Anatomy, Physiology and Pathology of Extracellular Fluid, Harvard University Press, 1952.
3. Starling, E. H.: The Fluids of the Body, Chicago, W. T. Keaner and Co., 1909.

Bankrupt black market

The dangerous drugs regulations in Hungary were broadly the same as in Britain, but an interesting difference is that a list of addicts was kept in the office of the medical officer of health. All "registered addicts" got an allowance of their drugs at a special chemist's shop, where they always received their supply of the quantity prescribed. The Health Service covered the costs. By this scheme the Government hoped to prevent a black market in morphine, heroin, cocaine, etc. *Dezso Schachter, M.D. The Hungarian National Health Service. Brit. Med. J. Jan.* 16, *1960.*

Depression

The other physical accompaniments of the state [depression] bear careful noting, especially the state of the appetite and the weight, since the degree of severity here will give a most useful estimate of the practical effects on the patient's general functioning. Other curious physical changes may be noted; for example, curly hair may straighten out in a depression only to curl again with recovery. The significance of such changes is not known. *Wendell S. Muncie, M.D. Clinical Importance of Overt and Hidden Depression. Rhode Island M. J. Feb. 1960.*

EEG's in diagnosing epilepsy

Where visceral components accompany the commonly accepted varieties of fits, diagnosis is easy. When these phenomena come by themselves, their epileptic quality may be overlooked. Careful searching through the patient's and the family's history will often be rewarded by other stigmata of epilepsy in the patient or in the genetic pattern.

Electroencephalography is especially useful. When the history is uncertain, and the manifestations are borderline, electrical tracings may support the diagnosis. However, a blind reliance on diagnosis by electroencephalography alone is to be avoided for the following reasons: From 10 to 20 per cent of those having convulsions have normal EEG's. From 10 to 15 per cent of normal persons who have never had a fit have abnormal EEG's. Abnormal EEG's may be found in patients with psychoneurosis and anxiety states. Sydenham's chorea has an EEG pattern common to patients with major attacks. Abnormal EEG's by adult standards are increasingly common in children of decreasing age under 10 years. *Ray Hepner, M.D. Some Unusual Varieties of Visceral Epilepsy. Missouri Medicine. March* 1960.

The Forand Bill and Individual Freedom

WALTER L. OBLINGER,* *Springfield*

I THINK YOU know that a variety of medical care plans for the aged have been introduced in Congress. In addition to the Forand Bill, there is the Javits Bill, the Mills Plan, the McNamara Bill, and the Administration Bill. They all seek to provide medical service to the aged financed through the social security system or general tax revenues, through contributions from beneficiaries, through matching funds to the states, or a combination of these. While they differ in some respects, my observations with the reference to the Forand Bill will more or less hold true for the others.

The Forand Bill (HR 4700), introduced by Aime J. Forand (D-RI), would provide all those persons eligible under social security with free hospitalization up to 60 days a year plus an additional 60 days of nursing home care — total 120 days in any twelve month period. It would also provide surgery, incuding medical, dental, minor surgery, and emergency out-patient service in a hospital or doctor's office.

To finance this the OASI tax would be increased ¼ of 1 per cent initially then rise to 2 per cent in 1969. It is estimated by the Health, Education, and Welfare Department that the cost of the Forand Bill would be $1.1 billion for the first year. However, actuarial estimates produced by the Health Insurance Association of America place the first year costs at between $2.074 billion and $2.387 billion. Costs would spiral in the year 1980 to $7.6 billion.

These figures give no consideration to the fact that historically such estimates on social insurance costs have been low, that these estimates are made on the basis of the 1960 dollar, no consideration being given to the inflationary effects of the legislation itself. Furthermore, no consideration in these estimates is given to demands and pressures for the almost certain expansion and liberalization of benefits once the program gets under way.

Social security taxes would jump. Under the present tax rate schedules, social security taxes by 1969 will be 9 per cent of $4,800 of taxable annual earnings of an employee. The employer and the employee will each be contributing 4½ per cent for a total of $432. Self-employed persons will then be paying 6¾ per cent on the first $4,800 of their earnings or $324 annually. In 1969, if the Forand Bill is enacted in its present form and nothing else occurs to increase social security costs, over 11 per cent of taxable payroll will be needed to pay the costs of compulsory insurance. In other words, the social security tax will amount to $528. This tax is in addition to income tax and other taxes.

It is of the utmost importance that the issues involved in the Forand Bill be clearly defined. The fundamental issue is not the care of the aged. The proponents would like nothing better than to be able to represent to the American public that the medical profession is opposed to the Forand Bill because it is not interested in the aged or that it wants to be free to charge exorbitant fees. The truth of the matter is, as the proponents well know, that for some 2,000 years the medical profession has been dedicated to the medical care of the people. The medical profession has always taken care of the medical needs of the total population, including the aged; and when patients are unable to pay a fair fee, the fees are scaled accordingly, or no fee is charged at all. There is no segment of the American public now going without medical care, except a few living in isolated communities.

The immediate crisis was precipitated by inflation—the rising cost of living—food, clothing, shelter, etc., not just medical costs. While we have reservations about the extent of the need, there is a need for some plan of financing medical care to the aged. Where we differ from the proponents is in the method to be used in meeting the need.

Proponents of the Forand Bill feel and think that it is necessary to propel the Federal Government into a program of actively and directly providing medical service. Of course, this means that the government will have to control the purveyors of the service; in this case, surgeons,

**General counsel, and director of legislative activities, ISMS. Presented at Springfield Insurance Underwriters Association, May 19.*

hospitals, dentists, and nursing homes. The government, in order to budget for the program, will have to control the kind and quality of the services, select the physicians, hospitals, and nursing homes that will provide the services, and set the fees for the service. This is the only way that the government could enter into such a program. It represents a departure from the basic, so-called insurance concept of the social security system. Instead of making cash handouts which presumably have some relation to the monies collected under the program, the government would embark upon a program of socialization by undertaking to provide for the health and welfare of those eligible under the system.

It should be apparent to anyone that, in so doing, the government will embark upon a program that will have no end—a bottomless pit! In the first place, the proposed legislation will not do the job the proponents claim for it. It will cover only 60 per cent of the older population, and it will not provide for any type of medical care other than surgery. How many ailments and diseases attendant upon old age can be remedied by surgery? What about rehabilitation, domiciliary home care, visiting nursing care? Just what are the medical needs of the aged population? Wouldn't it be logical to get facts first—to find out just what the needs are before we attempt to prescribe and apply legislative remedies? And yet that is just what the proponents propose to do with this legislation. And if there is a social problem here, then the program should cover not just 60 per cent but 100 per cent of the group.

Secondly, we know that the social security system has become a political plaything; that every two years when Federal elections are to be held, some further liberalization of the social security system is proposed or passed for the purpose of winning votes. If this liberalization trend continues—and there is no reason to believe that it will not—other persons will be made eligible, and the extent of medical coverage will increase. The newborn, the newlyweds will get consideration. Types of medical care other than surgery, hospitalization, and nursing home care will be offered. If the Forand Bill passes, the precedent and pattern will have been established to completely socialize the medical profession.

The whole concept is foreign to our way of life. The issue here is not the care of the aged, but how shall we take care of the aged under our free enterprise system. If we believe in free enterprise, then solutions should be sought consistent therewith. The medical profession is seeking solutions in the form of voluntary health insurance coverage for the low-income, low-resource citizens over age 65. Such coverage has expanded 170 per cent in the past six years.

The Health Insurance Association of America estimates that 49 per cent of persons 65 years of age and older had some form of voluntary health insurance at the beginning of 1960. It says that in 1952, 59 per cent of the total population had some form of insurance coverage and this was increased by 13 per cent to an estimated 72 per cent by 1960. For the aged population, however, the proportion insured doubled during this period, increasing from 26 per cent to about 49 per cent. The 26 per cent insured in 1952 represented 3.4 million of the then 13 million aged persons.

The 49 per cent of the approximately 15.7 million aged persons represents 7.7 million estimated to have health insurance in January, 1960. In addition to the 49 per cent of the 65 and over who now have health insurance, another 15 per cent, 2.4 million persons, are officially classified as indigent, and provision is made for their individual needs through old age assistance supported by Federal-state matching fund programs. Thus, at the present time approximately 64 per cent of the over-65 population has a hedge against medical care costs. It is further estimated that at the present rate of voluntary insurance growth, 90 per cent of the over-age-65 group will have some form of insurance coverage by 1969.

ISMS program

The Illinois State Medical Society is fully aware of the problem and is offering a solution consistent with our free enterprise system. In conformity with the program developed by the Illinois State Medical Society, the Illinois Medical Service (Chicago Blue Shield) has made available the Series 65 Blue Shield Certificate for persons over 65. It provides not only benefits for surgery and in-hospital medical care but other services as well. As I understand it, this new certificate is similar to the commonly held general Blue Shield certificate, with the excep-

tion that it provides 30 visits per admission for in-hospital medical care; the maximum indemnity provided for diagnostic x-ray and pathologic services has been increased and, of course, does not cover obstetrical care.

The cost of the new contract is $1.65 per month. At the same time, Hospital Service Corporation (Chicago Blue Cross) offered the Series 65 Blue Cross Certificate which provides 30 days of Blue Cross service benefits per hospital admission at a cost of $9.65 per month or $11.30 per month for the total package. In so far as Blue Shield is concerned, if an unmarried subscriber's annual income shall not exceed $2,000 and his net worth shall not exceed $15,000, or a married subscriber's income together with that of his spouse shall not exceed $3,000 or their worth not exceed $20,000, the indemnity provided by the certificate shall constitute payment in full for the service rendered, provided the physician rendering the service has agreed to participate in this phase of the program.

The Federal government should seek to stimulate such local programs and confine itself to indirect programs that match funds with local programs: a mortgage plan to finance construction of nursing homes, one-time grants for construction of needed facilities, greater income tax credits for medical costs, higher maximum amounts of taxable earnings and credits permitted to social security beneficiaries so that they can remain active and productive. The government should explore the feasibility of income tax credits to employers who hire older persons. The government, however, should never intervene directly in human relationships, as it is proposed that it do in the physician-patient relationship.

The real issue

The issue posed by the Forand Bill is that of freedom. Not only is the freedom of the physician to practice medicine as he chooses involved; the freedom of all of us is in jeopardy. In a free society the very essence of freedom is to make decisions, whether those decisions be right or wrong. If a person desires to use his money to buy a television set rather than to provide voluntary insurance for his old age, that fundamentally is his decision, or it should be. The worst feature about the social security system is that it gives the individual no choice. Undoubtedly there should be some social security system. The medical profession has never taken a position against social security. But the individual should be allowed to choose to be covered under such a system or to provide for his old age himself through other programs. When we reach the point where society makes the decisions for the individual and thus takes away his right to make those decisions, then it can be said that the individual no longer has freedom, that we have arrived at a regimented society, whether we call it socialism, fascism, or something else.

If the government can impose its will upon the medical profession and decide what kind of medical service the individual should have, then the way is clear for the government to make similar decisions for all of the other professions and trades in this country. The way is clear for the government to move in on the grocer, or the tailor, and audit his costs and tell him what quality of material should be used, how much labor should go into his product, and what he should charge.

Common false impressions

In any discussion of the social security system, there are some misconceptions that should be cleared up. You hear much said about the existence of a trust fund, that taxes paid into the system are insurance premiums, that social security is an insurance plan, that contributions are set aside in the trust fund to be paid out in the form of benefits when the contributor reaches retirement age. The truth of the matter is that there is no trust fund as such; all funds paid into the social security system go into the Treasury to be replaced by bonds. That money is spent as received for general tax purposes. Of course, the bonds don't stay in the trust fund very long because, for the most part, current social security benefits are being paid out of current receipts. To say it another way, the primary source of the money for current benefit payments is the current contributions from employees, employers, and the self-employed; a fund of "modest" amount is developed which arises from any excess of current contributions over current benefit payments; this fund permits a contribution schedule which progresses in an orderly known amount, acts as a buffer for variations in contributions and benefit outlays, and

provides a modest current-income source from interest earnings (7½ per cent). The important thing to remember is that in the insurance sense no trust funds exists—no reserves which go toward financing payment of benefits. All or substantially all of the contributions being received are being passed out to those persons retiring at age 65 or otherwise qualifying for benefits.

According to *Actuarial Study No. 48,* a study of long-range cost estimates under the 1956 Amendment to the OASDI Act issued by the social security system, it was reported that covered employees and their employers, as a class, pay only about 42 per cent of the value of their benefits, whereas new entrants and their employers will pay 169 per cent of the value of their benefits. The new entrant into the social security system (and his employer) is paying $1.69 for each dollar he can expect to receive from the system. Self-employed new entrants may expect to contribute $1.25 for each dollar of benefits. This process of passing on the cost of current benefits to coming generations will accelerate, and should the Forand Bill or some other scheme of financing medical care of older persons through the social security system pass, we shall shortly reach the point of resistance on the part of new entrants. We shall also place the system itself in jeopardy.

Right now the system has a greater contingent liability than the entire national debt. It has been variously estimated that between $90 billion and $300 billion is needed as of 1959 (as opposed to $22 billion now in the fund) to bring the reserve fund into some semblance of actuarial soundness. What all this adds up to is the fact that the cost for present benefits to persons eligible for benefits under social security is being passed on to coming generations. This, to me, is morally reprehensible. In the hearings on the Forand Bill, Walter Reuther made the following statement on behalf of the AFL-CIO:

> "We recognize that the new benefits will cost money, and we stand ready to meet the cost. Under the Forand Bill, social security taxes would be increased by a quarter of 1 per cent of taxable payrolls, both for employees and employers."

Doesn't Mr. Reuther know that the new benefits will probably cost double or triple such rate? Doesn't he know that the cost for current workers would be many times greater than the initial ½ of 1 per cent and still infinitely greater for new entrants? By what right does Mr. Reuther, or the national Congress for that matter, speak for the young of this generation and the members of future generations who will bear the actual cost?

This brings me to another point. Just how will the margin for personal savings be affected by compulsory social security contributions which are scheduled to increase by 80 per cent in the next ten years? For 1959, social security contributions of $9,612 million will be about 43 per cent of estimated personal savings of $22,000 million, and the latter has been estimated as 7 per cent of disposable income. If the 1969 contribution rate of 9 per cent were in effect in 1959, social security taxes estimated at $17,300 million would be 78 per cent of personal savings of $22,000 million. And this before adding the cost of the Forand Bill! This is where this welfare state legislation leads you. Just what right does Congress and the Walter Reuthers of this country have to mortgage our future savings?

I could say much more about the threat this poses to life insurance, the inflationary effects of social security which directly challenge older people, but I shall content myself with this admonition of Judge Brandeis from the Case of Olmstead v. United States (1928).

> "Experience teaches us to be most on our guard to protect liberty when the government's purposes are beneficent."

The medical profession stands as a roadblock, a last obstacle on this road to the welfare state. The medical profession is directly challenged and has the responsibility of meeting the challenge. To medicine has gone the honor of defending our freedom — our way of life. It is time for all men who believe in the free enterprise system to rally and enter the fray.

If you feel that these issues are important — if you are concerned about freedom of opportunity for your sons and grandsons; about the tax burden being piled upon coming generations; about increasing government intervention in the life of the individual; about the weakening of the moral fibre of our nation; I urge you to sit down and write to your Congressman, to your U.S. Senators, and urge them to vote against any enactment of compulsory care of the aged. I urge this association to adopt a resolution against the Forand Bill.

From the Secretary's Office

There is now only one administrative ISMS office, and that is located at 360 N. Michigan Ave., Chicago 1, Ill. There is a branch office in Springfield, in charge of the General Counsel of the society, Mr. Walter L. Oblinger.

Our German confreres have been having trouble with their government, so we are informed by a WMA news item. The goverment wanted to increase benefits under the insurance scheme. The patient was to pay the doctor who had to turn in the money to the government. The patient, of course, thinks the money goes to the doctor as an increased fee. So far, the physicians have prevented this.

Members who missed the annual dinner also missed seeing the famous Hawaiian dance group of Montgomery, Portes, Goodyear and Rose. Portes and Goodyear have modified the "Little Grass Shack" version by adding a touch of the square dance. Why not, now that Hawaii is a state?

Mrs. Kathryn Simmons, or "Kay" as she is known to most of us, has resigned. She will leave us on July 15. Kay will be missed by all of us, and we wish her all kinds of good luck in her retirement.

Two interesting talks were given at the public relations luncheon, one by Federal Judge Julius Miner of the Northern Illinois District and the other by Judge David W. Peck, former presiding justice of the Supreme Court of New York County. Both of these talks concerned impartial medical testimony.

The antivivisectionists are concentrating on Congress to legislate their desires and have formal support in Senator John Sherman Cooper of Kentucky. His bill (S3570) is identical in major provisions to the German law adopted when the Nazis first came into power in 1933. (See Editorials, p. —.) It was sponsored by Hermann Goering, who was honorary president of the German National Antivivisection Society. It did not prohibit animal experiments but strangled research with so much red tape that it was not worth the effort. It was cited at the Nuremburg trials as one reason why the Nazi experimenters turned to the use of humans.

A new periodical has just appeared, "Medico-legal Digest," Vol. 1, No. 1, edited by Milton Solin. Under his leadership and with the excellent advisory board listed on the title page, this should prove a well worth-while publication. This issue contains some very interesting material.

Some of the important actions of the House of Delegates at the recent meeting were:

1. Divided the Committee on Medical Service and Public Relations into two committees.
2. Went on record as being opposed to all forms of socialism whether or not the medical profession was involved.
3. Commended Adams County for its academic school program.
4. Raised dues $30 per year.
5. Urged members to continue nurse recruitment drive.
6. Urged annual polio vaccination injections (booster shots).
7. Made numerous changes in the Constitution and By-Laws.

George F. Lull, M.D.

[*Ed. Note: This page was written during Dr. Lull's tenure as acting executive administrator.*]

THE P. R. PAGE

John A. Mirt

Work of committee is divided

The House of Delegates at the 120th annual meeting in May approved changes in the Constitution and By-Laws of the Illinois State Medical Society which have a bearing on the future PR and medical service activities of the Society.

Heretofore, these functions have been carried on by the Committee on Medical Service and Public Relations. The Edlund report recommended that two separate committees be entrusted with these duties. The House approved the recommendation, and two committees were established—a Committee on Medical Service and a Committee on Public Relations.

The Committee on Medical Service will consist of five members and the president and secretary-treasurer, ex-officio. Its activities will be carried on under the supervision and direction of the Council. Members of the committee will be appointed by the Council for three-year terms, excepting that initially the terms will be staggered: two for three years, two for two years, and for one year.

This committee will be responsible for informing the membership of all legislative matters of interest to the medical profession in Illinois. It will maintain surveillance of all bills introduced in the legislature having direct or indirect effect on the practice of medicine or on the health of the people of Illinois.

Effective liaison also will be maintained with the AMA Committee on Legislation so that the ISMS will be kept informed concerning Federal legislation. The committee also will recommend a legislative program for approval by the Council and promulgate this program among the members of the Society.

The Committee on Public Relations will consist of six members, to be chosen by the Council for three-year terms. Initial appointments terms will be staggered, with two named for three years, two for two years, and two for one year.

It will be the duty of the committee to prepare and submit a public relations program for the ISMS to the Council for approval. Such a program should include public service projects of long and short durations which will increase the public's esteem for the medical profession.

Both committees will embark upon expanded programs provided for through an enlarged office staff and an increase in dues. This not only should improve the position of the Society and the medical profession in the eyes of the public but it will establish the ISMS in the forefront of medical organizations fighting for the maintenance of a high standard of health services.

House takes stand on socialism

The House of Delegates also adopted a statement of policy regarding socialistic proposals, such as bills of the Forand type. The House approved a reference committee recommendation:

"The ISMS firmly opposes socialism in all of its forms. The compulsory health schemes, which the welfare state planners are promoting at this time, are examples of socialism, which not only the medical profession but the public must vigorously oppose."

When asked why medicine in Illinois is against the Forand Bill or similar proposals, the answer is "It is against any form of socialism."

Adams County program commended

Since 1957, the Adams County Medical Society has been promoting academic scholarship achievement in Quincy and Adams County high schools by awards to those in the upper echelon of their classes. The program is designed to encourage superior and talented youth, but it has provided also effective P.R. for the profession.

This fact was recognized by the House of Delegates, which adopted a reference committee report commending the county society for its worthwhile promotional efforts.

Other county societies may obtain details by writing to Dr. Harold Swanberg, 209-224 W.C.-U. Building, Quincy.

EDITORIALS

Were *You* represented?

The 120th Meeting of the ISMS has come and gone. In some ways it was a very successful and interesting meeting; in others it was disappointing. At a time when the private practice of medicine is at the crossroads a large number of our members did not attend the meeting, nor were they represented.

Strunsky, the Russian-American author, once said "Statistics are the heart of democracy." If this is true, the ISMS needs the services of a cardiologist, as the statistics of our annual meeting leave much to be desired.

The House of Delegates is the policy-making body of our state society, and its actions are binding on all our members. The House meets, as a rule, only once a year, so many important items have to be covered in a relatively short period. This year at the opening session of the house 30 component societies out of a total of 92 were not represented. The figures for the second and third sessions were even more depressing as 32 and 37 component societies were conspicuous by their absences.

Very often physicians are critical of the officers of their medical organizations and their methods of conducting society business. Sins of omission and commission of the officers are popular subjects of discussion during locker and dressing room seminars. It is stated quite often that the society, either local, state, or national as the case may be, is run by a small entrenched group so that the average member has little or no voice in its affairs.

How and why do these "entrenched groups" take over? The answer is simple. The members of these groups are usually the only ones who are willing to sacrifice the time, money, and hard work to carry on the affairs in which every member has a vital and important stake. If one third of the component societies of an important state society, such as ours, are not represented in the policy-making body, then the members of those societies either have implicit faith and confidence in their confreres or lack interest in what is happening to their profession.

Let 1961 be different, and let us have 100 per cent participation. This is the only way we can have true democratic action. If you are not repesented, you have no grounds for fault-finding; and if you think that you are improperly represented, you should take steps to correct this on the local level.

George F. Lull, M.D.

Heat and Drugs

Summer is the time of year to check the drugs in the medical bag for signs of deterioration from heat. Some products such as antibiotics maintain their potency for a year or two provided they are stored in temperatures below 80°F. But the temperature in the trunk or glove compartment of a car standing in the sun may go as high as 120°F. Deterioration is rapid, especially when the antibiotic is in solution or suspension. Pills, capsules, and powders are more stable than the liquid products, but they deteriorate also when the temperature is high.

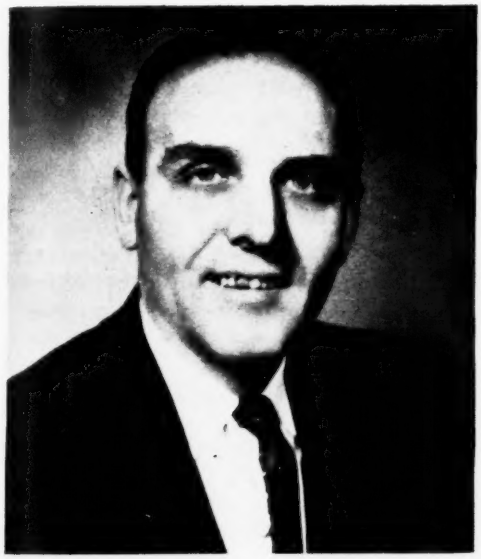
Some antibiotics change color or become more turbid under these conditions; others crumble. But many lose their potency without undergoing visible changes in appearance. There is nothing to do about the problem except to discard antibiotics that have been in the bag for more than a week, especially when subjected to intense summer heat.

Many cars are air conditioned, but none to our knowledge come equipped with a refrigerator. Small, portable, ice box units are available, but they are troublesome and more suitable for picnics. We'll pass along the idea of a car refrigerator to help out the family doctor.

Mr. White to direct medical services, economic research

Mr. Roger N. White will join the staff of ISMS in August as director of medical services and economic research. He comes to the Society after serving six years as executive director of the Hospital Council of Lackawanna County, Pa. From 1951-54 he was staff secretary of the Medical Society of the State of Pennsylvania, during which time he was associated with Mr. Robert Richards, now ISMS exective administrator.

A native of Pennsylvania, Mr. White has a pre-engineering diploma from Keystone Junior College, and there where he excelled in athletics.



Roger N. White

He graduated from Pennsylvania State University with a B.S. degree in education as a chemistry and mathematics major and taught those subjects and coached athletic teams in school districts in the state for four years. After having served three years as assistant director of the Industrial Training Sales Division of the International Correspondence School in Scranton, he returned to the university in 1949 and for two years was district extension service representative.

During World War II Mr. White served with the U.S. Navy and was discharged with the rank of lieutenant.

Mr. White is a member of the Hospital Association of Pennsylvania, the American Hospital Association, and the Scranton Chamber of Commerce. He has served as a membership chairman of the Scranton YMCA, chairman of the finance committee of the United Churches of Lackawanna County, and secretary to the Foods Division of the Scranton United Fund.

He is married and has four children.

Request to county society secretaries

The annual report of the Committee on Archives stressed the importance of getting today's medical news preserved in some permanent form. Everyone whom we have consulted has been of the opinion that this can best be accomplished by having county society secretaries send such news items to the "News of The State" section of our Illinois Medical Journal. This will give us a permanent printed and filed record which can easily be consulted by physicians or others interested in medical history.

A half century hence today's medical activities will be medical history, and most probably will seem as antiquated and possibly as illogical as many medical ideas and practices of 1850 to 1900 seem to us. However, let's write them down and keep the record straight. And while doing this, be sure to preserve any historical material pertaining to medicine which may be found in old trunks and attics and send such records to the Committee on Archives at the Chicago office of the ISMS. Too often such old records are consigned to the incinerator without careful examination and appraisal.

Tom Kirkwood, M.D.
Committee on Archives

Antihistamines for hypertension

Lipman[1] reported a two-pronged attack on hypertension aimed primarily at eliminating stress. He treated 19 civil service employees with a simple anti-stress diet and an antihistamine. All had been disabled previously with long-standing symptomatic hypertension with established elevation of the diastolic pressure. All were instructed to avoid irritants such as tobacco, stimulants such as coffee and tea, and depressants such as alcohol or other habit forming drugs. The sodium intake was limited, and animal fats

restricted to the barest minimum. Oleomargarine was substituted for butter and skimmed milk powder for whole milk. Chicken, lean fish, whole grain cereals, citrous fruits, and green and leafy vegetables were recommended.

The patients received an antihistamine in the form of Chlor-Trimeton Repetabs® averaging 20 mg. per eight hours. Clinical improvement was observed. Symptoms were ameliorated even though a marked lowering of the blood pressure was not always noted. Many lost weight. They were able to return to full duty status with a minimum loss of man hours due to illness.

This study is not well controlled and credit for success cannot be given to any single phase of treatment. Lipman was of the opinion that the antihistamine played a definite role in reducing stress (aside from its sedative action). He contends that the antihistamine is capable of performing many of the functions of adrenalin and when Chlor-Trimeton is present in the blood, it will discourage the production of adrenalin in response to stress. This hypothesis will need much more research before it can be accepted.

1. Lipman, Daniel C.: Stress and Hypertension: Use of Antistress Diet and Antihistamine. J. Am. Geriatrics Soc. 8:177 (March) 1960.

Antivivisection and red tape

Now pending in the national congress is S3570, a proposal by Senator John Sherman Cooper of Kentucky to require licensure of every individual scientist who might work with vertebrate animals under any federal grant, contract, or project using federal funds. Laboratories in which animal research were to be conducted would be inspected and issued "Certificates of Compliance." Research plans would have to be submitted by the Secretary of the Health, Education, and Welfare Department for approval before the projects could be started. Presumably variations would not be permitted. Detailed annual reports would have to be submitted. The National Institutes of Health would be assigned police duties.

The Cooper Bill has no constructive purpose, but, as Dr. Lester R. Dragstedt, president of the National Society for Medical Research, points out, it proposes "to drain away the time and resources of scientists who are trying to find better ways to save lives and alleviate suffering." Dr. Dragstedt has branded the Cooper Bill as "an attempt by the antivivisection cult to strangle medical research with red tape."

Walter L. Oblinger

Editorials from Other Journals

The buttonholer

A meeting is a melting pot, attended by people with a variety of miens and motives. Some attend as dedicated individuals fighting for a cause. Others attend as dyed-in-the-wool playboys, trying to get a loose woman tight.

From both of these groups, and from all those in between, comes the Professional Buttonholer. He's the individual who corners you in a meeting room or a hotel corridor and spends from 20 minutes to an hour expounding on a subject of absolutely unilateral interest.

If you've been exposed long enough and often enough, you know that the Buttonholer never asks a question. To do so would permit an answer and possibly terminate a one-sided conversation. You also know that the problem is often compounded by bourbon breath or chronic halitosis.

We could go on for hours, telling how to spot a Buttonholer across a crowded room. But instead we'll close with one simple observation: As far as Buttonholers are concerned, don't be one. *GP, January* 1960.

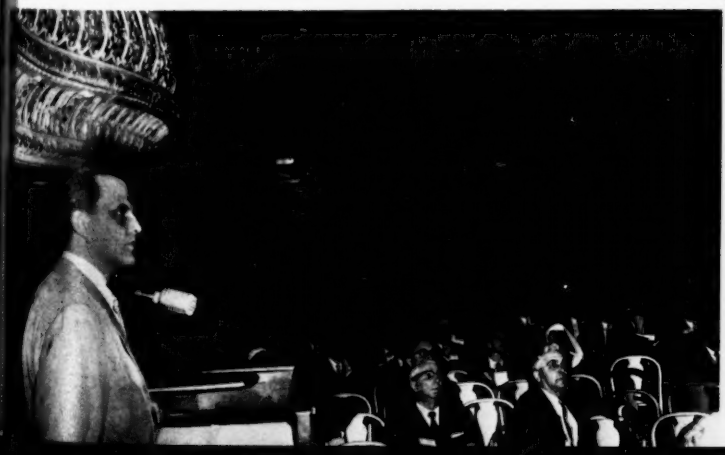
Photo story of the
1960 Annual Meeting

Dr. O'Neill cheerfully installs president. At installation ceremonies, Dr. Joseph T. O'Neill, retiring president, presents to Dr. H. Close Hesseltine, incoming president, the insignia of office, the medallion and gavel.

Three new ISMS officers pledge support—(left to right) Secretary-Treasurer Jacob E. Reisch, Springfield; President H. Close Hesseltine, Chicago; and First Vice President Andrew J. Brislen, Chicago. Second Vice President Clinton D. Swickard, Charleston, was unable to attend the meeting.

Dr. J. Ernest Breed (left) and Dr. Theodore LeBoy of Chicago are the newly elected members of Council of the ISMS.

Dr. E. A. Piszczek, Chicago, became the new Chairman of the Council.



First Harold Camp Memorial Lecture audience filled the ballroom at the Sherman Hotel. Dr. Ernest S. Crawford, assistant professor of surgery, Baylor University College of Medicine, Houston, delivered the address for Dr. Michael E. DeBakey, his associate who was delayed in his return from Europe.

At the Public Relations Luncheon Judge Julius H. Miner (left) U.S. District Court, Chicago; and (right) the Honorable David W. Peck, formerly presiding justice of the Supreme Court of the State of New York spoke on their experiences in impartial medical testimony. Dr. Edwin S. Hamilton (center), chairman of the Committee on Medical Service and Public Relations, presided. Dr. Hamilton is president-elect.

Dr. Joseph B. Kirsner as he delivered the Oration in Medicine Wednesday afternoon.

Dr. Willis J. Potts spoke on pediatric surgery in the Oration in Surgery on Wednesday

Reference Committee No. 4 hears reports of Council Committees in Tuesday morning session. Left to right, Drs. Harry Mantz, (Madison Co.), James H. Cross, Chicago; Paul D. Reinertsen, (Fulton Co.); and Chairman Maurice Murfin, (Macon Co.). Dr. Quentin D. Young, fifth member of the committee, was sitting with the audience.

Giant wheel-hat of Mrs. Glen H. Harrison, Lake Forest, won the prize for designing a chapeau that best depicted projects of her county Woman's Auxiliary. Five other county presidents help steady the spokes.

The Distaff Line-Up for 1960-61. Mrs. J. V. Prohaska (fifth from the left) turns over the president's gavel to the incoming president, Mrs. C. L. Wunsch. Officers for the coming year are (left to right), Mrs. G. J. Sciaraffa, Elgin; Mrs. W. Scrivner, East St. Louis; Mrs. A. S. Watson, Glen Ellyn; Mrs. R. E. Westland, Skokie, president elect; Mrs. Prohaska, Chicago; Mrs. N. Chester (installing officer), Chicago; Mrs. Wunsch, Aurora; Mrs. W. Roller, Monmouth; Mrs. J. Koenig, Chicago; Mrs. N. DuPuy, Quincy.

Surprised and pleased, Dr. George F. Lull listens to Dr. Joseph T. O'Neill read from the plaque the citation for meritorious service to the medical profession presented to him at the Annual Banquet.

Aloha! Thursday night at the grand finale of social functions, the Annual Banquet tuned to Hawaii, old friends and new donned bright colored leis in celebration of the spirit of the evening. Seated at one of the 60 tables (clockwise from the left) are Mrs. and Dr. Norman L. Sheehe, Mrs. and Dr. Samuel H. Bess, Mrs. and Dr. Francis X. Graff, Dr. Paul D. Reinertsen, Mrs. and Dr. Maurice D. Murfin, and Dr. Elvin L. Clark, all from downstate.

Banquet speaker Virgil W. Peterson, acting director of the Chicago Crime Commission.

Physician teams in home and office, (left) t
Wm. Boughers, Chicago, and the E. Mor
gomerys of Shelbyville, were seated at the spea
er's table and were photographed with the presi
ing chairman Dr. Andy Hall (standing). They a
believed to be the only husband-wife members
the club.

Hale and hearty 50-Year Clubites and some guests, over 175 strong, celebrated at luncheon in their honor Tuesday, May 24. At table in the foreground (clockwise from the left) are Miss Helen Branstrator, Chicago (guest of Dr. Hill); Drs. Joseph Prendergast, Oak Park; E. M. Hill, Chicago; Dubley T. Dawson, Georgetown; Andrew C. Schoch, Chicago; A. A. Knapp, Winter Park, Fla.; William Cooley, Peoria; and Dr. Knapp's daughter, Mary, also of Winter Park. At table center background (counterclockwise) are Dr. Irving H. Neece, Decatur; Mrs. Stone and Dr. F. Lee Stone, both physicians past presidents of the Society, and Dr. G. C. Otrich, Councilor for many years.

M.D.'s run in the family. Two of the father a
son combinations attending the 50-Year Cl
luncheon: (left to right) Drs. A. C. Wendt, J
and Senior, and Dr. S. H. Soboroff and his so
Dr. J. Soboroff, all of Chicago. Both fathers b
came members of the Club that day.

Proud wives stand by the presidents, Drs. John J. O'Neill (left) and H. Close Hesseltine.

ISMS NEWS

Mrs. Wanda Ross

Mrs. Mary Ward

Mrs. Kathryn Simmons

Dropping out of the picture

"The old order changeth giving place to new"

This month the door to the six-room Monmouth office of the Illinois State Medical Society on Main Street closed and marked the end of an era begun in 1923. Within these rooms most of the administrative work of the Society had been carried on until last October, under direction of Dr. Harold Camp, executive secretary.

Few members of the Society ever visited there, but all have had bills for dues and receipts postmarked *Monmouth* and many an announcement as well.

Mrs. Frances Zimmer and Mrs. Jane Swanson have moved to Chicago to join the headquarters staff, but Mrs. Wanda Ross and Mrs. Mary Ward will remain with their families in Monmouth.

"In an office of four since last October, everyone did a little of everything, and it's hard to departmentalize us," says Mrs. Zimmer. However, Wanda kept the membership card records for dues, did all the bookkeeping, Journal subscriptions, kept records of sales of exhibit space and billing for the technical exhibitors at the annual meetings. Now after 11 years with the society, she plans to devote her time to husband and home.

Monmouth office on second floor, center building now closed.

Mary ran the "machinery" in the workroom—the electric mimeograph, and folding machines, and addressograph—and kept the mailing lists of the Society's 10,000 members in order. She made up the cross-files on membership records, handled the monthly AMA membership reports, did the correspondence, printing of programs and mailing letters for the postgraduate medical education programs.

Mrs. Ward after 13 years with ISMS changes her role to mother and housewife, Byran James having arrived on the scene just prior to the annual meeting in May.

Both girls were well known especially to the doctors downstate. One of them attended all the postgraduate meetings with Dr. Camp and until this year, worked behind the registration desk at the annual meetings.

The Society on July 15 loses another longtime employee, Mrs. Kathryn Simmons, who is retiring. Kay began working for ISMS in the 1920's when her father, Henry G. Ohls, M.D., was managing editor of the Illinois Medical Journal. She provided the liaison between physicians and public for the Educational Committee from 1925 until it was dissolved four years ago, arranging lectures for lay groups and the "live" radio programs on popular health subjects, then conducted by the Committee. Since that time she has worked for the Scientific Service Committee and then the Post Graduate Medical Education and Scientific Service Committee arranging for speakers for county medical society programs.

Kay, who recently moved to Evanston, intends to spend some time with her four grandchildren and relax for a while. Her sunny disposition and her fund of "who's who" information will be greatly missed.

To all three we say thank you for jobs well done.

Registration at annual meeting tops record

Registration figures for the 1960 annual meeting of the Illinois State Medical Society show a record attendance total of 3,387, over 400 more than have signed in for any one of the last three years. Physician attendance, which included residents, was 1,994, or 111 more than registered last year. Guests number 736 and included interns, medical students, nurses, and wives of physicians. The Woman's Auxiliary had 315 members present, and personnel for the exhibitors was 342.

Over 1,500 physicians registered during the first two days, 880 on Tuesday, opening day, and 58 as late as Friday.

For the first time, four girls from the Chicago Convention Bureau helped behind the registration desk in charge of Mrs. Kathryn Simmons of the Chicago office.

Dr. Piszczek heads Council

Edward A. Piszczek, M.D., Chicago, field director of the Suburban Cook County Tuberculosis Sanitarium District for 11 years and clinical professor and chairman of the department of preventive medicine and public health, Stritch School of Medicine of Loyola University, is the newly elected chairman of the Council, Illinois State Medical Society.

Dr. Piszczek has served on the Council for 10 years and has been chairman of the Tuberculosis Committee and a member of the Committee on Medical Service and Public Relations.

He received his M.D. degree from the Loyola University School of Medicine in 1933 and his M.P.H. from the Harvard School of Public Health in 1939.

He served as director of the Cook County Department of Public Health from 1940-1949 and has been field director of the sanitarium district for the last 11 years.

Fete 50-Year Club members

About 175 members and guests of the 50-Year Club met at their annual luncheon May 24 to reminisce.

Dr. Andy Hall, chairman since 1938, assisted by Dr. E.A. Piszczek, newly elected chairman of the Council, presented framed certificates of membership and lapel emblems to 15 of the 36 new membems in the Chicago area; those not in attendance have received their membership insignia. Twenty-nine downstate members have, or will be, welcomed into the club at meetings of their county societies this year.

Dr. James H. Hutton, a past president of the Society, was luncheon speaker. He gave an informal talk on "Odds and Ends about Public Health in Illinois."

House selects committeemen

Committeemen of the House of Delegates of ISMS were elected at the annual meeting of the society in May to serve during the year 1960 to 1961 as follows:

GRIEVANCE COMMITTEE—Drs. Percy E. Hopkins of Chicago and Victor V. Rockey of Freeport.

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS—Drs. Kenneth C. Johnson of Chicago, chairman; Ward Eastman of Peoria and George F. O'Brien of Chicago.

MEDICO-LEGAL COMMITTEE—Drs. George C. Turner of Chicago, chairman; Charles Allison of Kankakee.

COMMITTEE ON MEDICAL TESTIMONY—Drs. Leo P. A. Sweeney of Chicago, chairman; Harry D. Nesmith of Salem.

COMMITTEE ON PREPAYMENT PLANS AND ORGANIZATION—Dr. E. Lee Strohl of Chicago.

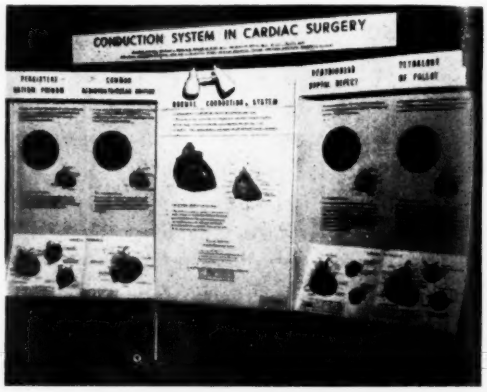
COMMITTEE ON MEDICAL BENEVOLENCE—Dr. F. M. Nicholson of Chicago.

Medals awarded scientific exhibits

From 31 scientific exhibits on view at the annual meeting in May, awards were made to those displaying the most original work and to those having the most educational value.

For original work, the Gold Medal was Awarded to the exhibit, "The Crico-Arytenoid Joint," prepared by Drs. Hans von Leden and Paul Moore from Northwestern University and the Gould Foundation. The Silver Medal Award went to the exhibit, "The Repair of Tissue Deficient Hernias by Aortic Implants," prepared by Drs. Samuel J. Fogelson and Roy G. Cooksey. No Bronze Medal was awarded this year in this category.

For educational value, the exhibit, "The Conduction System in Cardiac Surgery," prepared by Drs. Maurice Lev, William L. Riker, Arthur De Boer, Thomas Baffes, and W. J. Potts from Children's Memorial Hospital, Chicago, won the Gold Medal Award. The Silver Medal went to the exhibit, "Effective Control of Toxemia," prepared by Drs. Herbert E. Schmitz, Michael P. MacLaverty, and Robert S. Pavlic.



Three Bronze-Medal-winning exhibits for educational value displayed their yellow ribbons: "Cholangiography—Operative and Postoperative," prepared by Drs. Karl A. Meyer, Peter A. Rosi, Nicholas J. Capos, and Joseph J. Litschgi; "Hydatidiform Mole and Chorioepithelioma," prepared by Dr. Frederick H. Falls and Charlotte S. Holt; and "Leiomyoma and Leiomyosarcoma of the Gastro-Intestinal Tract," prepared by Drs. Hildegarde Schorsch and Hyo Hyun Byun.

The Committee on Awards—Drs. Gilbert H. Marquardt, Ward Eastman, and William E. Adams, chairman—selected the winners. Dr. Coye C. Mason was chairman and director of scientific exhibits.

AT THE EDITOR'S DESK

Nation's Human Resources

The average person eats 4.1 pounds of food per day, or 1,500 pounds per year. Two-thirds of this is made up of dairy products and eggs, meats, fish, and poultry; and fruits and vegetables. This bit of statistical information is included in a 90-page booklet, "Health, Education, and Welfare Trends, 1960," dealing statistically with the nation's human resources. Some other facts cited are:

1. For each of the past two years hospital construction outlays reached almost $1 billion. Four fifths of the money was non-Federal.

2. In spite of reductions in recent years there are still well over 600,000 resident patients of mental hospitals.

3. All Federal grants-in-aid totaled $6.3 billion in fiscal year 1959. Grants for health, education, vocational rehabilitation, welfare, and employment security accounted for $3.5 billion.

4. Over 30 percent of all persons entering the fifth grade now go on to college.

Copies of the booklet may be obtained from the Supt. of Documents, U. S. Printing Office, Washington 25, D.C., at 50¢ each.

Pharmaceuticals

Aralen (Winthrop) is getting to be one of those all-purpose drugs that raises our sense of skepticism. The latest, in case you missed it, was a report of dramatic and sustained relief in four cases of infectious mononucleosis. This article appeared in the May 7 issue of the JAMA.

Aspirin is available now in suppository form. It is recommended by Suppositoria Labs., Inc. for infants and children and also for adults suffering from peptic ulcer or otherwise irritated gastric conditions.

The Public Health Service investigated a new family of compounds, decarboxylase inhibitors, and found that alpha-methyl dopa, a Merck product, lowered blood pressure consistently. These inhibitors control some of the body's natural chemical reactions and alpha-methyl dopa blocks the formation of norepinephrine, epinephrine, and possibly serotonin. The drug also exerts a tranquilizing and sedative effect. Clinical trials will continue.

Hygroton is Geigy's new sulfonamide antihypertensive and saluretic. The competition among duretics is keener now that many substitutes for Diuril are available. The term saluretic has not yet appeared in our Stedman's Medical Dictionary, but it is most descriptive of the action of these new drugs.

Eli Lilly has introduced a new prenatal vitamin mineral supplement (En-Cebrin) to meet the increased nutritional demands of pregnancy and lactation. One capsule daily supplies all the essentials including a phosphorus-free calcium, and it is packaged in an attractive apothecary type bottle that our little mothers can keep as a lasting memento.

A Shocker

A catalog on hospital restraints arrived and shocked us into thinking about this type of business. It came from the Humane Restraint Company, who have pioneered and manufactured these products since 1876. The restraints are most attractive in themselves, and the wristlets and anklets will be lined with soft leather or foam inner lining if desired. We wonder whether their business has suffered since the advent of our modern tranquilizers. We have been told repeatedly that these drugs make the aggitated docile, and if so there is little or no need for restraints.

This catalog would have made a first-class inquisitionist drive, and in this respect was published several centuries too late. We suggest to the Humane Restraint Company that they find new uses for their excellent and well made devises. They could go into the business of making safety belts or harnesses used by mothers to keep small fry in tow, restraints for animals at zoos and those needed by veterinarians treating large animals—or save all for the next war.

Methuselahs Postponed

The Metropolitan Life Insurance Company tells us that the average length of life of the American people reached a new high of 69.7 years in 1959. The previous high was 69.6 years in 1954 and also in 1956. It was 69.5 years in 1958. Their statisticians doubt whether the record of gain in life conservation during the past century can be achieved again. The greatest margin for improvement lies in the development of new weapons for postponing and treating degenerative conditions.

Cartwheelers and Candy Stripers

The American Hospital Association points with pride to the 150,000 teenagers who are serving as volunteers in American hospitals. They are known as volunteens, cartwheelers, or candy stripers. They do a million-and-one odd jobs varying from reading to patients to carrying messages. It is a wonderful hedge against delinquency.

The original candy striper came from the Evanston Hospital, where the girls wore red and white striped pinafores. This was back in the early 1940's. The name originated in a statement by an elderly patient who received a tray from a nurse instead of a volunteer. He inquired, "Where's my pretty little candy striper tonight?"

Deaths by Accidental Poisoning

Accidental poisoning deserves our serious consideration, even though the incidence has decreased slightly since 1949. Approximately 1,400 deaths from this cause are recorded annually in the United States, and one fourth of these are children of preschool age. Barbituric acid and its derivatives are responsible for nearly one out of every four fatal accidental deaths. They are most troublesome in California whose residents account for about one third of the reported deaths from barbiturates. Overdoses of aspirin, chloral hydrate, paraldehyde, and other analgesics and soporifics are high on the list of causes. Other chemicals include wood and denatured alcohols, kerosene, household pesticides containing arsenic compounds, and heavy metals.

Long-term Anticoagulant Therapy Questioned

A VA cooperative study on the long-term treatment of cerebral vascular accidents failed to confirm the value of anticoagulants in preventing further strokes or lowering mortality. Nine hospitals participated in this study which involved 189 cases. They stressed extensive precaution in the use of these drugs because of the probability of increasing the chance of hemorrhage.

Those of us who heard Dr. Crawford give the Harold M. Camp Lecture may wonder where anticoagulants enter this picture. They demonstrated that 30 per cent of all strokes resulted from an occlusion of a vessel outside the head such as in the internal carotid. They found endarterectomy the treatment of choice.

Paying for That M.D.

According to the Association of American Medical Colleges, the average cost of a four year medical education (class of 1959) was $11,642 or $2,911 a year. The individual student and his family are paying the largest portion (82%) of the costs with minor assistance for outside agencies. The association's Datagram points out that 16 per cent of the 1959 graduating class of medical students receive no help from their families. In contrast, 36 per cent received $6,000 or more. Twenty five per cent received $100 to $2,900 and 23 per cent from $3,000 to $5,900. Further studies show that the parents of these students are in a slightly higher income bracket than the average American white urban family. Eighty-one per cent of the students earn money to pay their bills by working during summer vacations and during the academic year.

It is unfortunate that most of the students must do work that has nothing to do with medical education. Datagram states that we must draw upon a broader socio-economic base within the population if we expect to increase the number of physicians. In addition, medical students will need more financial assistance in order to eliminate unproductive work.

ANNOUNCEMENTS

Dr. Askey new A.M.A. president

Dr. E. Vincent Askey, Los Angeles surgeon, was inaugurated as president of the American Medical Association at its annual meeting in Miami last month, succeeding Dr. Louis M. Orr, Orlando, Fla. He thus becomes the spokesman for more than 175,000 physicians.

In 1952 he was elected vice speaker of the AMA House of Delegates and served as speaker from 1955 to 1959. He is a former president of the Los Angeles County and California State Medical associations.

Dr. Askey received his M.D. degree from the University of Pennsylvania in 1921. He is on the surgical staff of St. Vincent's Hospital.

In 1958 Dr. Askey was awarded the honorary degree of Doctor of Science from Allegheny College. The citation said that despite a busy practice, he found time to serve as "a member and president of the Los Angeles City Board of Education, combining high ideals, responsible citizenship, distinguished professional achievements."

August clinics for crippled children

Eighteen clinics for Illinois' physically handicapped children have been scheduled for August by the University of Illinois, Division of Services for Crippled Children. The division will hold 14 general clinics providing diagnostic orthopedic, pediatric, speech, and hearing examination along with medical, social, and nursing service. There will be two special clinics for children with cardiac conditions and two for rheumatic fever and one for cerebral palsy.

August 3—Alton (Rheumatic Fever), Alton Memorial Hospital
August 3—Hinsdale, Hinsdale Sanitarium
August 4—Macomb, District Hospital
August 5—Chicago Heights (Cardiac), St. James Hospital
August 9—East St. Louis, St. Mary's Hospital
August 9—Peoria, Children's Hospital
August 10—Champaign-Urbana, McKinley Hospital
August 11—Springfield, St. John's Hospital
August 12—Evanston, St. Francis Hospital
August 16—Belleville, St. Elizabeth's Hospital
August 17—Chicago Heights, St. James Hospital
August 18—Elmhurst (Cardiac), Memorial Hospital of DuPage County
August 18—Litchfield, Madison Park School
August 18—Rockford, Rockford Memorial Hospital
August 23—Effingham (Rheumatic Fever), St. Anthony Hospital
August 23—Peoria, Children's Hospital
August 24—Elgin, Sherman Hospital
August 25—Bloomington A.M. (General), P.M. (Cerebral Palsy), St. Joseph's Hospital

Changes in diagnostic laboratory service

Effective July 1, 1960, two changes were made in the diagnostic service furnished by the laboratories of the Illinois Department of Public Health.

1. Agglutination tests with patient's serum vs. the organisms of paratyphoid A (Salmonella paratyphi A) and paratyphoid B (paratyphi B) were discontinued as a routine service. Paratyphoid A fever has always been so rare in Illinois as to be practically nonexistent. Paratyphoid B is encountered only a little more frequently. Furthermore, there are so many cross-reactions with other Salmonellae that the interpretation of findings is difficult. Formerly blood specimens submitted for a typhoid agglutination test have also been tested for paratyphoid A and B agglutinins whether requested by the physician or not. Since June 30 only the typhoid agglutination test is performed on such specimens.

Culture of the clot for typhoid bacilli will be done as heretofore, and cultural examination of stool and urine specimens for any or the enteric organisms will be continued.

2. Animal inoculation for the isolation of tubercle bacilli will no longer be done. Culture methods are now employed which are approximately as successful as guinea pig inoculation and can be done at a fraction of the cost. Animals will continue to be used when required to distinguish type of acid-fat strains.

It is anticipated that savings resulting from the above changes will permit the introduction of new diagnostic services under development.

Medical examination of civil airmen

Effective June 15, 1960, the Federal Aviation Agency will require that student and private pilots be given their medical examinations by designated medical examiners. This rule reinstates a practice in effect from 1926 until 1945. Dr. James L. Goddard, the Civil Air Surgeon, has emphasized that any physician may be considered eligible for designation as an examiner.

His statement, made public February 11, follows:

In order to have a better understanding of the proposed rule, I wish to point out that it is designed to accomplish the following needed improvements in the administration of the Agency's medical certification program.

1. To maintain a group of medical examiners who are clearly responsive to the needs of public safety in the performance of examinations and the issuance of medical certificates to airmen.
2. To permit the administration of training programs to maintain the quality of performance of medical examiners and to permit the dissemination of special instructions pertaining to the needs of civil aviation.
3. To bring into the program those physicians who have the professional qualifications and a demonstrated interest in the medical certification field.
4. This would permit the designation of any qualified physician who, by his application, has demonstrated interest in the program.

Those physicians in localities where flying activities are conducted may wish to consider filing an application for designation by writing to the Civil Air Surgeon, Federal Aviation Agency, Washington 25, D.C.

Designation as an aviation medical examiner will qualify the designee to examine both Class II (commercial) and Class III (student and private) airmen, including control tower operators. Instructions concerning the required procedures, standards, and equipment will be supplied to those who apply.

Since commercial and airline transport pilots have always been required to obtain examinations from specifically selected physicians, there are presently some 2,000 aviation medical examiners previously designated and located throughout the country. Expanding aviation activities will result in a continuing need for additional examiners. There are at present some 400,000 active civil airmen of whom approximately 240,000 are examined each year.

PG courses in otolaryngology and bronchoesophagology

An intensive postgraduate basic and clinical program for practicing otolaryngologists is being given by the University of Illinois College of Medicine, department of otolaryngology, September 24 through 30. The daytime and evening program will include a wide variety of current advances in management, therapy, and philosophies, and a review of basic morphologic features. Panel programs are designed to bring out special features of otologic and reconstructive surgery and tumors of the head and neck. Luncheon chats are an important part of the daily program.

The department will conduct also a postgraduate course in laryngology and bronchoesophagology from October 17 through 29 under the direction of Paul H. Holinger, M.D.

Registration will be limited to fifteen physicians.

Interested registrants for either course should write directly to the Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12.

WMA to meet in Berlin

The XIVth General Assembly of The World Medical Association will be held in Berlin, September 15-22, 1960. The German Medical Association has scheduled its own annual meeting in conjunction with the General Assembly, and the opening and closing plenary sessions of the two organizations will be held together. Both meetings and all activities associated with them will be held in the new Berlin Convention Hall.

In addition, an International Film Program is scheduled during the entire period—its theme: Postgraduate Education. The excursion on September 22 will include a sight-seeing tour through the East Sector of Berlin and will end with a cruise on Havel Lake.

International congress of physical medicine

The Third International Congress of Physical Medicine will be held August 21-26, 1960, at The Mayflower, Washington, D.C.

The preliminary prospectus covering the international conference carries information in detail. A copy may be had on request by writing to Dorothea C. Augustin, Executive Secretary, Third International Congress of Physical Medicine, 30 N. Michigan Avenue, Chicago 2.

Foreign fellowship program for students

A fellowship program designed to further medical education by sending future doctors to remote areas of the world has been announced by the Association of American Medical Colleges.

The three-year program, established under a $180,000 grant from Smith Kline & French Laboratories, is open to all medical college students who have completed their third year of study. Scheduled to begin this summer, the program will permit an average of 30 students to participate each year.

The medical opportunity inherent in working with dedicated men already practicing in Africa, Asia, and other far-off places provides a first-hand experience in the care of patients that cannot be obtained in the formal academic environment." The SK&F Foreign Fellowships also provide "an excellent opportunity for cultural development since these preceptorships enable the students to view at first hand the mores and ethical backgrounds of other people."

Eligible students who are prepared to spend an average of 12 weeks working in foreign locales have been urged to submit applications to their respective deans for review. Following initial screening, up to three applications from each school will be forwarded to a distinguished panel of physicians who will make up the selection committee.

The committee includes Dr. Richard A. Young, dean, Northwestern University Medical School, Dr. Carroll L. Birch, professor of medicine, University of Illinois College of Medicine, and Dr. Robert G. Page, assistant dean, University of Chicago, the School of Medicine.

Awards will be made on the basis of the applicant's ability and objectives with special consideration being given to those programs which cannot be realized in the United States and through which the student can bring back valuable knowledge to this country.

Plan to aid Ob-Gyn residents

The American College of Obstetricians and Gynecologists has set up a Higher Education Loan Program (H-E-L-P) to enable resident physicians to complete their training in obstetrics and gynecology. Loans up to $5,000 will be made to help physicians through their specialty training period and early practice.

H-E-L-P will start operations with an initial working fund of $36,000, contributed by the College and its district organizations. This will be added to through individual contributions and grants if necessary.

For information, write to Mr. Donald F. Richardson, Executive Secretary, ACOG, 79 West Monroe Street, Chicago 3.

Ob-Gyn board examinations

Applications for certification in the American Board of Obstetrics and Gynecology, new and reopened, Part I and requests for re-examination in Part II are now being accepted at the Office of the Secretary, 2105 Adelbert Road, Cleveland 6. Deadline for receipt of applications is August 1, 1960. No applications can be accepted after that date.

The following change in requirements for certification was made by the members of the American Board of Obstetrics and Gynecology at the recent annual meeting in Chicago.

"A Resolution was passed at the recent annual meeting of this Board which eliminates the submission of Case Reports as part of Part I Examination. It is required, however, that each candidate eligible to take the Part II Examination bring to the place of examination, a duplicate list of Hospital Admissions as submitted with his or her application. *This change in requirements is not retroactive and therefore applies to candidates making application for the 1961 examinations.*"

It has also been resolved by members of the Board that Applications for Appraisal of Incomplete Training will no longer be accepted for review by the Residency Review Committee.

Study on Hand-Schuller-Christian disease

The cooperation of physicians is requested in a study of eosinophilic xanthomatous granulomatosis, and most specifically Hand-Schüller-Christian disease, being conducted by the Radiation Branch of the National Cancer Institute in the Clinical Center of the National Institutes of Health, Bethesda, Md. Its primary purpose is a search for therapeutic methods which may favorably affect the course of the disease.

Patients appropriate for this study are those with a histopathological diagnosis consistent with some phase of eosinophilic xanthomatous granulomatosis who have active disease. It is preferable, of course, that such patients not be seriously ill, as this precludes long-term studies of effects. In order to minimize the effects of prior treatment, those patients who have not received antifolic-acid, radiation, or steroid therapy for at least one month prior to their evaluation shall be considered most appropriate for the program; but previously treated patients will be considered for admission. Accepted patients will be studied for various periods of time and may be followed subsequently by either the referring physician or physicians at the Clinical Center. A comprehensive and individual program will be instituted for each patient and will include appropriate supportive and symptomatic care as well as the experimental therapy.

Physicians interested in the possibility of referring such patients should write to Dr. Charles G. Zubrod, Clinical Director, National Cancer Institute, Bethesda 14, Md.

Consider this fall . . .

The Two Postgraduate Courses

presented by

The Chicago Medical Society

NEWS of the STATE

County

Cook

APPOINTMENTS: Dr. Edmund A. Gorvett, assistant professor of medicine at Northwestern University Medical School, was recently installed as president of the medical staff of Passavant Memorial Hospital, and Dr. Franklin Lounsbury, assistant professor of surgery at the medical school, was named president-elect.

Dr. Waldemar Dasler has been promoted from associate professor to professor of biochemistry at the Chicago Medical School. He has been a member of the faculty since 1948.

Dr. Heinrich Necheles has been appointed professor of medicine at the Chicago Medical School. For the past 20 years he has been director of the department of gastrointestinal research at Michael Reese Hospital. He has previously been on university faculties including the University of Chicago, where he is still a professorial lecturer.

ELECTIONS. The Chicago Laryngological and Otological Society at their meeting in May elected Dr. Henry B. Perlman, president; Dr. Myron M. Hipskind, vice president; and Dr. Robert B. Lewy, secretary-treasurer.

At the annual meeting of the Chicago Pediatric Society in May, officers elected included Dr. Matthew M. Steiner, president; Dr. James A. Conner, vice president; Dr. Harry L. Faulkner, secretary; and Dr. I. Pat Bronstein, treasurer.

Officers elected by the Chicago Society of Industrial Medicine and Surgery include Dr. Richard E. Heller, president; Dr. Richard Perritt, vice president; Dr. Bille Hennan, secretary; and Dr. Charles Drueck, treasurer.

Chicago Surgical Society officers elected for the coming year include Dr. Walter G. Maddock, president; Dr. Robert L. Schmitz, secretary; Dr. Paul V. Harper, treasurer.

The Chicago Urological Society has elected the following officers: Dr. J. Kenneth Sokol, president; Dr. David Presman, vice president; and Dr. James H. McDonald, secretary-treasurer.

RESEARCH LABORATORIES. Ceremonies dedicating the Samuel Jefferson Sackett Research Laboratories at Northwestern University Medical School were held June 3, the fifth anniversary of the $600,000 grant for research into the cure and treatment of rheumatic fever and related diseases. The work on rheumatic fever has been under the direction of Dr. Gene H. Stollerman, associate professor of medicine.

Dr. Stollerman cited accomplishments since the Sackett Laboratories were established: (1) The discovery that mild streptococcal infections that are not epidemic do not cause rheumatic fever; (2) laboratory studies demonstrating new antibacterial enzymes in the blood; (3) new enzymes found only within the more virulent streptococci; (4) discovery of a new test for detecting immunity to streptococci causing rheumatic fever and nephritis that will help to evaluate usefulness of vaccines.

Research developments have attracted research project grants from many agencies to expand the work to many phases of immunology and to provide research fellowships to undergraduate and postgraduate medical students.

TOURS "DOWN UNDER." Dr. Meyer A. Perlstein, chief of the Children's Neurology Clinic at the Cook County Hospital, will hold cerebral palsy clinics and speak before medical groups in New Zealand for about three weeks, starting July 10, then in Australia for two weeks.

NORTHWESTERN AND REHABILITATION INSTITUTE AFFILIATE. The Rehabilitation Institute of Chicago, 401 E. Ohio Street, became an affiliate of Northwestern University Medical School in April. The affiliation further strengthens a close working relationship which has been in effect for several years.

The Institute presently houses the Mid-western Prosthetic Education Center and the Prosthetic Research Center, both of which are under the supervision of the Medical School.

Under the agreement, Institute facilities and professional personnel will be available to the university for instruction of undergraduate students in physical medicine and physical therapy.

Dr. Richard H. Young, dean of the Medical School was appointed to the Institute board of directors as a representative of the university.

NEW TB CLINIC. The Chicago Municipal Tuberculosis Sanitarium Board will construct a new out-patient clinic in the centrally located Medical Center District to replace eventually the work of two older clinics in the city. The land was acquired through a $125,000 appropriation bill passed by the First Special Session of the 71st General Assembly and approved by the Governor.

DR. VAIL RECEIVES HOWE MEDAL. Dr. Derrick T. Vail, professor of ophthalmology and chairman of the department at Northwestern University Medical School, has been awarded the Lucien Howe Gold Medal of the American Ophthalmological Society. The award, highest honor in American ophthalmology, was given in recognition of leadership in his field during the past 35 years through his work as an editor, teacher, clinician, and surgeon. Internationally known, Dr. Vail is author of more than 50 papers and several textbooks, and also serves as editor of the American Journal of Ophthalmology and as associate editor of several other medical publications.

GIFT TO MEDICO. Dr. Thomas A. Dooley, cofounder of MEDICO, last month received a $45,000 gift of intravenous solutions, including vitamins and sets for administering them, from Baxter Laboratories, Inc. of Morton Grove, for use in his jungle hospitals in Indo-China. Included was the stipulation that Dr. Dooley may have more when these are used.

"This shows the people of Asia that only a nation that allows capitalism to flourish allows gifts to organizations such as MEDICO," Dr. Dooley said in accepting the gift, and described the pharmaceutical industry's response to the program as "fantastic."

Lake

Members of the Lake County Medical Society and their wives enjoyed a golf tournament at the Glen Flora Country Club in Waukegan in June. The social hour and dinner meeting in the evening was the last meeting until September.

Lee-Whiteside

A combined meeting of the medical society and medical auxiliary of the Lee-Whiteside counties met for a special program June 16 at the Lincoln Manor Restaurant in Dixon. A program "Medicos in India" followed a prime rib dinner. Dr. W. McNichols, Sr., of Dixon gave an account of his experiences in "We Go Tiger Hunting," a 30 minute film he made. Rockford's Dr. Hugh Johnson chose "Fulbright to India" as his subject.

Logan

APPOINTMENTS. Dr. Armin M. Grossl and Dr. Paul Walter Tillman have been appointed assistant superintendents of Lincoln State and Dixon State schools respectively.

Dr. Grossl, born in Chicago, joined the Lincoln staff in November, 1957. Dr. Tillman had been a member of the medical staff at Lincoln State school since August 1955.

Madison

At the June meeting of the Madison County Medical Society, Dr. Axel N. Arneson of St. Louis, professor of gynecology at Washington University School of Medicine, spoke on "Natural History of Cervical Cancer."

St. Clair

NEW VOICE CLUB. Under the guidance of the St. Clair County Cancer Society, a group of laryngectomees got together to form a New Voice Club. A laryngectomee from the county, who has developed an ability at esophageal speech and has been assisting as a volunteer in teaching this method in the St. Louis New Voice Club, is in charge of the instruction of members. Rehabilitation of new and old patients is the purpose of the weekly meetings of its members.

Warren

Dr. Kenneth E. Ambrose, Monmouth, spoke on "Modern Concepts in the Diagnosis and Treatment of Leprosy," before the Monmouth Rotary Club.

General

Lectures Arranged Through the Illinois State Medical Society. John Albert Novotny, Peoria, clinical instructor in orthopedic surgery at the University of the Illinois College of Medicine, addressed the Bureau County Medical Society in Spring Valley, May 10, on "Fractures in the Upper Extremities in Children."

The Winnebago County Medical Society at their Annual Clinic Day in Rockford, May 11, heard Charles P. McCartney, associate professor and secretary of the department of obstetrics and gynecology, University of Chicago School of Medicine, speak on "Pre-Eclampsia."

John Arnold, associate professor of medicine, University of Chicago School of Medicine, took part in a panel before the Organization for the Southwest Community, May 24, discussing "Medical Careers."

Louis C. Johnston, clinical instructor in medicine, University of Illinois College of Medicine, spoke at the Y.M.C.A. Citizen's Forum, June 25, on "Health—Your Most Priceless Possession."

Alan R. Feinberg, associate in medicine, Northwestern University Medical School, addressed the Bureau County Medical Society in Princeton, June 14, on "What's New in Allergy."

Radio Program. On June 22, A. L. Aaronson, clinical associate professor of medicine, The Chicago Medical School, discussed "Your Hay Fever," on the radio program "Your Health Comes First" over station WJJD.

This is a public service program sponsored by the Illinois State Medical Society in cooperation with radio station WJJD.

Election: The Illinois Psychiatric Society has elected the following officers, all of Chicago: Dr. Joel S. Handler, president; Dr. Melvin Sabshin, president elect; and Dr. Harold M. Visotsky, secretary-treasurer.

Deaths

Charles Livingston Agnew, Aurora, a graduate of Meharry Medical College, Nashville, in 1895, died March 4, aged 92.

F. W. Barry*, Coffeen, who graduated from Washington University School of Medicine, St. Louis, in 1902, died recently, aged 83.

Frederick E. Buechner*, Delmar, N. Y., formerly of Chicago, who graduated from the College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois in 1901, died March 15, aged 82. He served on the staff of the Grant Hospital for many years.

Joseph P. Cangelosi, Chicago, who graduated from Chicago Medical School in 1936, died May 30, aged 52. He was senior surgeon at St. Elizabeth's Hospital.

Paul C. Fox*, retired Coral Gables, Florida, formerly of Chicago, who graduated from Rush Medical College in 1912, died May 8, aged 74. Formerly an Oak Park gynecologist and staff member of West Suburban Hospital for more than 35 years, he was a member of the American College of Obstetrics and Gynecology, the Central Association of Obstetrics and Gynecology, and the Chicago Gynecological Society, and a Fellow of the American College of Surgeons. He was on the staff of Rush Medical College many years.

Henry Frost Hooker*, Danville, a graduate of Northwestern University Medical School in 1908, died May 19, aged 80.

Harold Mark Hoover*, Joliet, a graduate of the University of Illinois College of Medicine, Chicago, in 1933, died February 13, aged 60. He was a member of the American Academy of General Practice, was associated with St. Joseph's and Silver Cross hospitals, and served as physician for the Joliet public grade schools from 1942 to 1953.

Herman Josephy*, Chicago, formerly of Hamburg, Germany, who graduated from Universitate Rostock Medizinische Fakultat, Rostock, Mecklenberg, in 1910, died May 19, aged 73. He was a former neuropathologist at Chicago State Hospital, and from 1949 to 1952 had been an associate professor of neurology at Chicago Medical School. At the time of his death, he was pathologist at Bethany Methodist Hospital.

L. J. Jurek*, retired, Chicago, who graduated from Chicago Medical School in 1935, died May 31, aged 69.

W. F. KALISZ*, Chicago, who graduated from Loyola University School of Medicine in 1916, died May 28, aged 67. He was president and editor emeritus of the National Medical and Dental Association of America. At the time of his death, he was senior staff surgeon at St. Elizabeth's Hospital.

HARRY GEORGE LEON*, retired, Chicago, who graduated from Loyola University School of Medicine in 1919, died May 26, aged 72. He was a former coroner's physician.

PHILIP LEWIN*, Chicago, noted medical author and internationally recognized authority in his field, died May 13, aged 71. He was graduated from Rush Medical College in 1911, served his internship at Children's Memorial Hospital, was at St. Luke's Hospital for two years, and then served his residency at Paris University. He became a certified orthopedic surgeon in 1935. At the time of his death he was attending orthopedic surgeon at County Hospital, senior attending orthopedic surgeon and former chairman of the department of bone and joint surgery at Michael Reese Hospital, consulting orthopedic surgeon at Municipal Contagious Disease Hospital, professor emeritus at Northwestern University Medical School, where he had been chairman of the department of bone and joint surgery, and professor of orthopedic surgery at Cook County Graduate School. Dr. Lewin, colonel in the Medical Corps of the Army of the United States, served in both World wars and was commanding officer of the Michael Reese 16th Evacuation Hospital Unit in its organization for World War II at Camp Blanding, Fla., from 1942 to 1946. He was a founder and former secretary, vice president, librarian, and historian of the American Academy of Orthopedic Surgeons, a past vice president of the Chicago Orthopedic Society, and vice chairman of the Medical Advisory Committee of the National Foundation for Infantile Paralysis. He was also a member of the American Orthopaedic Association, the American Medical Association, the American Rheumatism Association, and a Fellow of the American College of Surgeons.

LOUIS LITTON*, Chicago, who graduated from the University of Illinois College of Medicine, Chicago in 1924, died April 11, aged 66.

RODERICK HUGH MAGUIRE*, Canton, Illinois, who graduated at St. Louis University School of Medicine in 1918, died February 9, aged 69.

JOSEPH MOLES*, Oak Forest, Illinois, who graduated at Chaddock School of Medicine, Quincy, in 1917, died January 28, aged 68.

ALFRED NICHOLAS MURRAY*, retired, Evanston, eye, ear, nose and throat surgeon, who graduated from Rush Medical College in 1901, died May 26, aged 87. He was the author of several books on ophthalmology and a former president of the Chicago Ophthalmological Society and a fellow of the American Medical Association.

MEREDITH B. MURRAY*, River Forest and Maywood, who graduated at Creighton University School of Medicine, Omaha, Nebraska, in 1914, died April 28, aged 72. He was a captain in the Army Medical Corps during World War I and joined the U.S. Public Health Service upon his return and later the Veteran's Administration. He served as assistant chief surgeon at Hines Veterans hospital for six years. At the time of his death he was a senior member of the Oak Park and Westlake hospitals. He was past president of the DesPlaines Branch of the Chicago Medical Society, a fellow of the American College of Surgeons and the International College of Surgeons, and a charter member of the Catholic Physicians Guild.

BEATTRICE C. OPRE*, Victoria, who graduated from Chicago College of Medicine and Surgery in 1908, died recently, aged 81.

DOMINIC A. PALMISANO*, Chicago, who graduated from Chicago Medical School in 1923, died May 3, aged 60. He was a senior staff member at St. Elizabeth's Hospital, former president of the Italian Doctors Association, and the Chicago Medical Society's Northwest Branch.

DANIEL F. PAUL*, Rock Island, who graduated from The Hahnemann Medical College and Hospital, Chicago, in 1917, died recently, aged 70.

D. D. RABER*, Bloomington, who graduated from Bennett Medical College, Chicago, in 1908, died recently, aged 82.

WALTER SCHILLER*, Chicago, noted pathologist, author, and cancer researcher who devised the Schiller test for early diagnosis of carcinoma of the uterine cervix, died May 2, aged 72. A graduate of the University of Vienna, Austria, in 1912, he became director of the laboratories of the Second Woman's Clinic at the University of Vienna before coming to the United States. He also served as director of the laboratories at the Jewish Memorial Hospital in New

York. In Chicago he headed the laboratories of Cook County, State, Roseland, and the Women and Children's hospitals, and was consultant pathologist at the latter and also at Columbus and Cuneo Memorial hospitals. He was a member of the American Medical Association and a Founding Fellow of the College of American Pathologists.

H. E. SCHMITZ*, Chicago, who graduated at Loyola University School of Medicine, Chicago, in 1927, died April 17, aged 59. He was chairman of the department of obstetrics and gynecology at Stritch School of Medicine of Loyola University and of Mercy Hospital, where he also was Director of the Institute of Radiological Therapy. He was a professor of gynecology at Cook County Graduate School. He was chief of staff at the St. Vincent's Infant and Maternity Hospital and the Lewis Memorial Maternity Hospital. At the time of his death he was vice chairman of the Board of Directors of the American Cancer Society. As a charter member of the Illinois Division of the Society, throughout the years he served as chairman of the Executive Committee, the Medical and Scientific Committee, and the Professional Education Committee. In 1952 he received the Annual Award of the Illinois Division for contributions leading to better diagnosis and more effective treatment of carcinoma of the cervix. He had been a member of the following societies: American College of Obstetrics and Gynecology (president-elect), Central Association of Obstetricians and Gynecologists (1958 president), American Gynecological Society, American Association of Obstetrics and Gynecology, the American Radium Society, a member of the American Medical Association, and a Fellow of the American College of Surgeons.

HELMUT P. G. SECKEL*, Chicago, who graduated at the Chicago Medical School in 1925, died April 13, aged 59. He was an assistant professor at the University of Cologne, Germany, before joining the University of Chicago as professor of pediatrics in 1937.

GEORGE O. SOLEM*, Chicago, who graduated from Rush Medical College in 1917, died May 5, aged 72. He was an associate of the late Dr. Bertram W. Sippy, and a member of the staff of Lutheran Deaconess Hospital.

RAYMOND J. THOMA*, Chicago, who graduated from St. Louis College of Physicians and Surgeons in 1918, died June 7, aged 69. He was on the staff of Evangelical Hospital.

ROBERT HENRY WOODRUFF, Springfield, a graduate of Northwestern University Medical School in 1904, died February 14, aged 83. He was chief of vital statistics of the Illinois Department of Public Health.

**Indicates member of the Illinois Medical Society.*

BOOK REVIEWS

OBSERVATIONS ON "DIRECT ANALYSIS" THE THERAPEUTIC TECHNIQUE OF DR. JOHN N. ROSEN. Morris W. Brody, M.D. $2.95. Pp. 104. New York, Vantage Press, 1959.

This small booklet really warrants no review that can be presented for the benefit of the readers of the *Illinois Medical Journal*. Dr. Rosen has created a dramatic, even drastic, direct treatment of the paranoid schizophrenic in which he literally "forces" from his patient the latent meaning of his illness. This technique is new and is practiced but by a few analysts to the present, but is not accepted by the majority of psychotherapists. A few case reports are given and the treatment technique is presented, useful perhaps to the interested psychoanalyst, but of interest to few others.

Louis D. Boshes, M.D.

PREVENTIVE MEDICINE. Herman E. Hilleboe, M.D., and Granville W. Larimore, M.D. $12.00. Pp. 731. Philadelphia, W. B. Saunders Co., 1959.

This is the effort of 31 contributors, practically all of whom are heads of various departments of the State of New York Department of Health. The editors, who are also contributors, are outstanding men in their field and they have produced a text that should be valuable to all groups interested in preventive medicine. The approach to the subject is, as stated by the editors, to distinguish between the prevention of occurrence and prevention of progression of disease and disability. This secondary type of prevention is more difficult, more costly, and less likely to be as successful as the primary type; still medicine is faced with it daily, and often it is too late to do very much about it.

The book is divided into three parts: "Prevention of Occurrence," "Prevention of Progression," and " Supporting Services for Preventive Medicine." Part I contains chapters on water supplies, milk-borne illness, waste disposal, accidents, occupational health, V.D., virus diseases, nutritional defects, dental health, and a number of other important subjects in the field of preventive medicine. Part II covers screening methods for a number of diseases, rehabilitation, alcoholism, narcotic addiction, etc. Part III has chapters on health education, social work, epidemologic methods, and related subjects.

The short chapter on Periodic Health Inventories contains tables indicating the "yield" (per cent positive) of various tests (taken from Roberts, N. J., "Periodic Health Maintenance Examinations"). The author of the chapter, Frank W. Reynolds, M.D., estimates the cost of a complete checkup outside of the hospital to be approximately $50 to $100, depending on the number of tests required. He calls attention to the fact that if this cost is budgeted, it amounts to only one or two dollars per week.

Abstract of Council Actions

Meeting of June 26, 1960

ISMS REQUESTS HEARINGS ON HR 12580

Dr. Hamilton, Chairman of the Committee on Medical Service and Public Relations, and Mr. Oblinger, General Counsel, reported on legislative activity related to health programs for the aging. The Council approved the following telegram which was sent to Senators Paul H. Douglas, Everett M. Dirksen, Lyndon Johnson and Harry F. Byrd:

ILLINOIS STATE MEDICAL SOCIETY RESPECTFULLY REQUESTS YOUR ASSISTANCE IN HOLDING ADEQUATE HEARINGS BY THE SENATE FINANCE COMMITTEE ON HR 12580 PARTICULARLY TITLE SIXTEEN. BELIEVES SUCH FAR REACHING LEGISLATION SHOULD NOT BE ENACTED WITHOUT OPPORTUNITY FOR ALL TO BE HEARD. THIS SOCIETY BELIEVES THIS APPROACH TO PROVIDING MEDICAL CARE TO AGED IN ACCORD WITH FREE ENTERPRISE PRINCIPLES.

H. Close Hesseltine, M.D., President

This message was composed in conformity with AMA policy established at the annual meeting in June.

ACTION ON HOUSE DELEGATES RESOLUTIONS

Resolution #18 -- Medical Examining Panel

The Chairman of the Council, in consultation with General Counsel, was authorized to recommend to the Director of the Department of Registration and Education names of individuals who may be called upon to serve on a panel as examiners in the basic sciences and clinical subjects.

Resolution #7, 8, 10 -- Kendall County; #22 -- Effingham County; #26 to 32 -- Will Grundy County; all dealing with some aspect of the over-all problem of the aging.

The Chairman of the Council was authorized to appoint a committee to study these resolutions and prepare recommendations for the Council's consideration for further House of Delegates action next May.

WHITE HOUSE CONFERENCE ON AGING

Dr. Cannady, Chairman of the Committee on Aging, submitted a report on the forthcoming State Meeting on the White House Conference on Aging. He requested councilors to contact regional directors of the IPAC regarding adequate physician representation at the meeting.

SPRINGFIELD OFFICE LOCATION

Dr. Reisch, secretary-treasurer, described a tentative location for the regional and legislative office in Springfield. The Council approved the location, subject to examination and approval by the previously appointed Regional Office Committee.

EYE EXAMINATION FORM FOR PUBLIC SCHOOLS

Council approved a form submitted by Dr. Weisbaum, Chairman of a special committee appointed to draft one to adequately cover the eye exam made compulsory by House Bill #30. The form will bear the notation ". . . as approved by the Committee on Eye Health of the Illinois State Medical Society."

BUSINESS REFERRED TO COMMITTEES

Dr. Hesseltine presented a letter from David Kinzer, Illinois Hospital Association, in re infection control in hospitals. Referred to Committee to Co-operate with the Illinois Hospital Association.

Dr. Hesseltine also presented a letter from Andy Glosecki, National Foundation, in re the Foundation's revised policies on polio patient aid. Referred to Committee on Polio Control.

Mr. Richards presented two resolutions passed by Illinois Pharmaceutical Association in re group practice pharmacies. Referred to Ethical Relations Committee.

Dr. Montgomery, Chairman of the Finance Committee, recommended that the fiscal year be changed to coincide with the calendar year to simplify auditing procedures. Referred to the Committee on Constitution and By-Laws and to the Executive Administrator.

REPRESENTATIVES TO CONFERENCES

The Chairman of the Council was authorized to appoint representatives to the AMA regional legislative meeting at French Lick, Ind., August 12-13, and two representatives to the Regional Forum on Veterans Affairs at Indianapolis, Sept. 17.

GENERAL ADMINISTRATIVE MATTERS

1. In accordance with AMA policies on the retirement of persons over 65 years old, the Council empowered the Finance Committee to alter the retirement plan so that employees might be retained past the age of 65, subject to annual physical examinations to be paid for by the Society.

2. The Executive Administrator was authorized to invest surplus cash in short term government securities, subject to approval by the Finance Committee.

3. Council approved recommendation by the Chairman of the Journal Committee and the Director of Publications that advertising rates for the Journal be increased 5% effective January 1, 1961.

4. The Council committees were presented by Dr. Piszczek and were approved. Lists will be distributed as soon as the members accept their appointments. Mr. Richards presented his assignments of staff directors to the committees and these were approved.

ELECTION OF EMERITUS AND RETIRED MEMBERS

Council approved emeritus status for J. Carl Hall, Centralia; Archibald L. Hoyne, Chicago, and Thomas I. Stines, E. St. Louis, Robert E. White, Hollywood, Florida, was elected to retired status.

The chapter on Ionizing Radiation crowds a lot of valuable information into 20 pages including a glossary of radiological terms and a bibliography of 25 references.

A vast amount of material of value to the student or practitioner of preventive medicine has been included in this manual and it is well indexed. It should find wide reception in the field for which it was intended.

George F. Lull, M.D.

AN ATLAS OF NEUROSURGICAL TECHNIQUES. James L. Poppen, M.D. $28. Pp. 522. Philadelphia, W. B. Saunders Company, 1960.

This is a very unique book if for no other reason than that it is the only book of its kind. Practically every known neurosurgical technique, except stereotaxic surgery, is discussed and portrayed in beautifully executed drawings.

The author is recognized as one of the great technicians in present-day neurosurgery. His incisions for exposure of the various parts of the intracranial cavity are rather versatile. I am sure that he would be the first to admit that technique cannot be demonstrated on a printed page, and this is one of the criticisms of this kind of book. Many of the steps of a neurosurgical procedure are portrayed well. But, unfortunately, the difficult aspects of removing a meningioma, for example, are not shown. Neurosurgeons are not the only ones who could profit by studying this book. It would be excellent for the operating room nurse and the surgeon's assistant as a guide or reminder of steps prior to assisting in a neurosurgical operation.

Briefly stated, this is a very good book by a recognized, experienced, neurological surgeon on a subject which receives entirely too little attention today.

Daniel Ruge, M.D.

MODERN NUTRITION IN HEALTH AND DISEASE. Michael G. Wohl, M.D., and Robert S. Goodhart, M. D. $18.50. Pp. 1152. Philadelphia, Lea & Febiger, 1960.

Nutrition, like other aspects of medicine, is so dynamic that a textbook can scarcely keep up with the changes. The first edition of this book, published about five years ago, carries a preface stating that its organization is based on Wohl's "Dietotherapy," but that extensive revisions had been made because of rapid advances in nutrition over the previous decade. The preface to this second edition describes the revisions, deletions, and additions required by progress over the past five years, half the period between the first two books. If a third edition is brought out in two and a half years, many more revisions will be needed, so fast does our knowledge of various aspects of nutrition grow. The role of inborn errors of metabolism in mental retardation of children and the exciting results being obtained with dietary treatment of phenylketonuria are cases in point.

The 59 contributors include such well knowns as Ancel Keyes, Bargen of Mayo's, Crohn of Columbia, and many other university and industrial scientists. There are new sections on dietary factors in atherosclerosis, and on food additives; if your patients should ask about the safety of such additives as sodium propionate or monoammonium glutamate, you turn to page 467 to assure yourself that these chemicals are safe. Mr. Secretary Flemming's press releases on coal tar colors are mentioned, as well as the addition of antibiotics and hormones to animal feed and flesh. There is even a section on emergency, or disaster feeding, in case you have to head for the cellar.

All in all, a "commonsensical" and comprehensive book, marred somewhat by an inadequate index, typographical errors, and dated spelling. An over-all editing job would be helpful. The illustrations and paper stock are excellent, and there is a selected bibliography at the end of each chapter.

T. R. Van Dellen, M.D.

THE CLONAL SELECTION THEORY OF ACQUIRED IMMUNITY. Sir Macfarlane Burnet. $5.00. Pp. 209. Nashville, Vanderbilt University Press, 1959.

The mechanism of the formation of antibody, and therefore of acquired immunity, has occupied the attention of some of the best minds in biology and medicine. In this book Sir Macfarlane Burnet, one of the world's outstanding theoretical biologists, attacks the problem from a new standpoint, one influenced markedly by modern genetic concepts.

In the author's own words, the crux of clonal selection theory of immunity is "it assumes that in the animal there exist clones of mesenchymal cells, each carrying immunologically reactive

sites corresponding in appropriate complementary fashion to one (or possibly a number of) potential antigenic determinants. This provides a population of cells which, when an appropriate stage of development has been reached, are capable of producing the population of globulin molecules which collectively provide the normal antibodies. When an antigen is introduced, it will make contact with a cell of the corresponding clone, presumably a lymphocyte, and by so doing stimulate it to produce in one way or another more globulin molecules of the cell's characteristic type. The obvious way of achieving this is to postulate that stimulation initiates proliferation as soon as the cell in question is taken into an appropriate tissue niche, spleen, lymph node, or subacute inflammatory accumulation."

Space does not permit a detailed analysis of this theory nor a comparison with the several other current theories on antibody formation. It must suffice to say that the approach is timely and the reasoning lucid. Time and experimentation will determine the validity of the theory.

This volume has a value beyond the development of a new theory of antibody formation. There are beautifully written introductory chapters which cover the basic features of bacterial genetics and of immunology. Furthermore, in his discussion of the clonal selection theory the author provides informative chapters on immunological tolerance, mesenchymal cell function in immunity, the pathology of the immune response, proliferative diseases of the reticular tissue and mesenchymal cells, and neoplastic disease.

This book would be worth reading for the information alone; but when coupled with Burnet's theorizing, it becomes an exciting and provocative story that should be of interest to every biological scientist and physician.

Guy C. Youmans, M.D.

YOUR HEART: A HANDBOOK FOR LAYMEN. H. M. Marvin, M.D. $4.50. Pp. 335. Garden City, N. Y. Doubleday & Company, 1960.

At least twenty books of this type have appeared in the last decade to answer the multitude of questions asked by the cardiac patient. Dr. Marvin's long service to the American Heart Association and his wide medical experience fit him to combine the details of medical understanding and research, tailored to the receptivity of the nonmedically trained individual.

A knowledgeable patient who read the book found it enlightening; it increased her perspective of heart disease and added to her medical vocabulary. She felt that reading the book would relieve her anxieties about heart disease, but thought the details were somewhat excessive, even redundant.

The author includes rare conditions such as the carcinoid syndrome and arachnodactyly in a discussion that can mean little to the layman. Dr. Marvin devotes too much space to controversial subjects. Specificially, the controversy regarding the "arm-chair treatment of coronary thrombosis" has been relegated to a legal problem, wherein the doctor is alleged to omit it simply because of fear of legal action. Most patients would prefer to believe that the physician makes a decision on the basis of what he thinks is best for the patient rather than from fear of legal restraint. Why promote malpractice consciousness in the public when it is already on the increase?

A whole section is devoted to the anticoagulant controversy. Since trained cardiologists still debate the problem, the layman should not be expected to resolve it for them from the detailed statistical reports included in this text. Dr. Marvin may believe that open heart surgery will replace closed heart operations, but the statement could produce ungrounded criticism of a capable physician who advocates the older and, in many instances, safer closed procedures where applicable.

There is an excellent glossary with succinct definitions and references to the medical terms used by physicians, and an appendix listing booklets and leaflets obtainable from local Heart Associations. The author publicizes the significance of the Heart Association in providing education and research dedicated to practical patient care.

William H. Wehrmacher, M.D.